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1968 Annual Session
The Samoset, Rockland
June 9, 10, 11

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of
The Maine Medical Association

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■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

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References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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Prescribing information on next page.

b.i.d. The sensible schedule that covers the patient day and night

DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines when the offending organisms are tetracycline-sensitive.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occure. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg. of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg. every 6 hours for a minimum of 4 doses or 300 mg. every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg. every 6 hours or 300 mg. every 12 hours until a cure is effected.

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Phenacetin (3 gr.) .....194.0 mg.
Hyoscyamine sulfate .....0.031 mg.
Codeine phosphate.....¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

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When the agitated businessman goes to work...

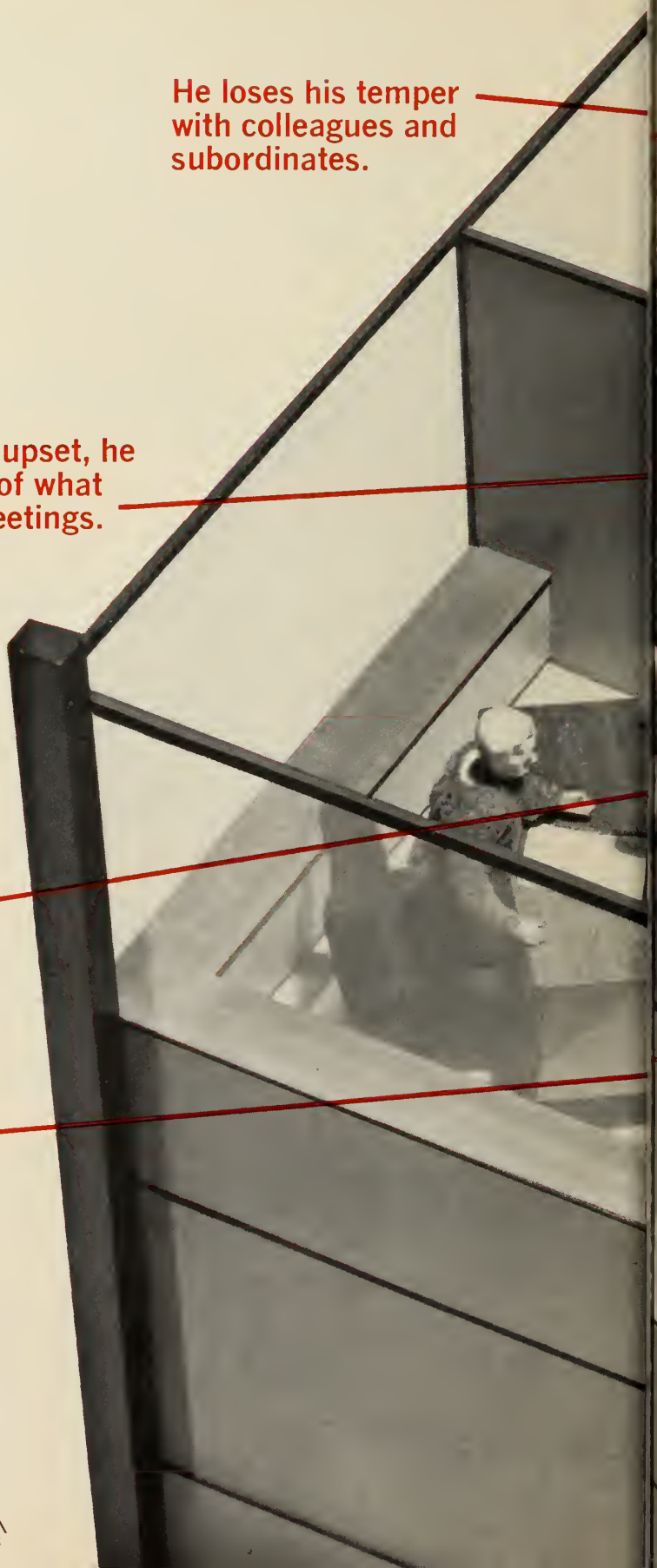
He goes home at night and takes it out on his family.

He loses his temper with colleagues and subordinates.

Emotionally upset, he misses half of what is said at meetings.

He is always fearful about his standing with the boss.

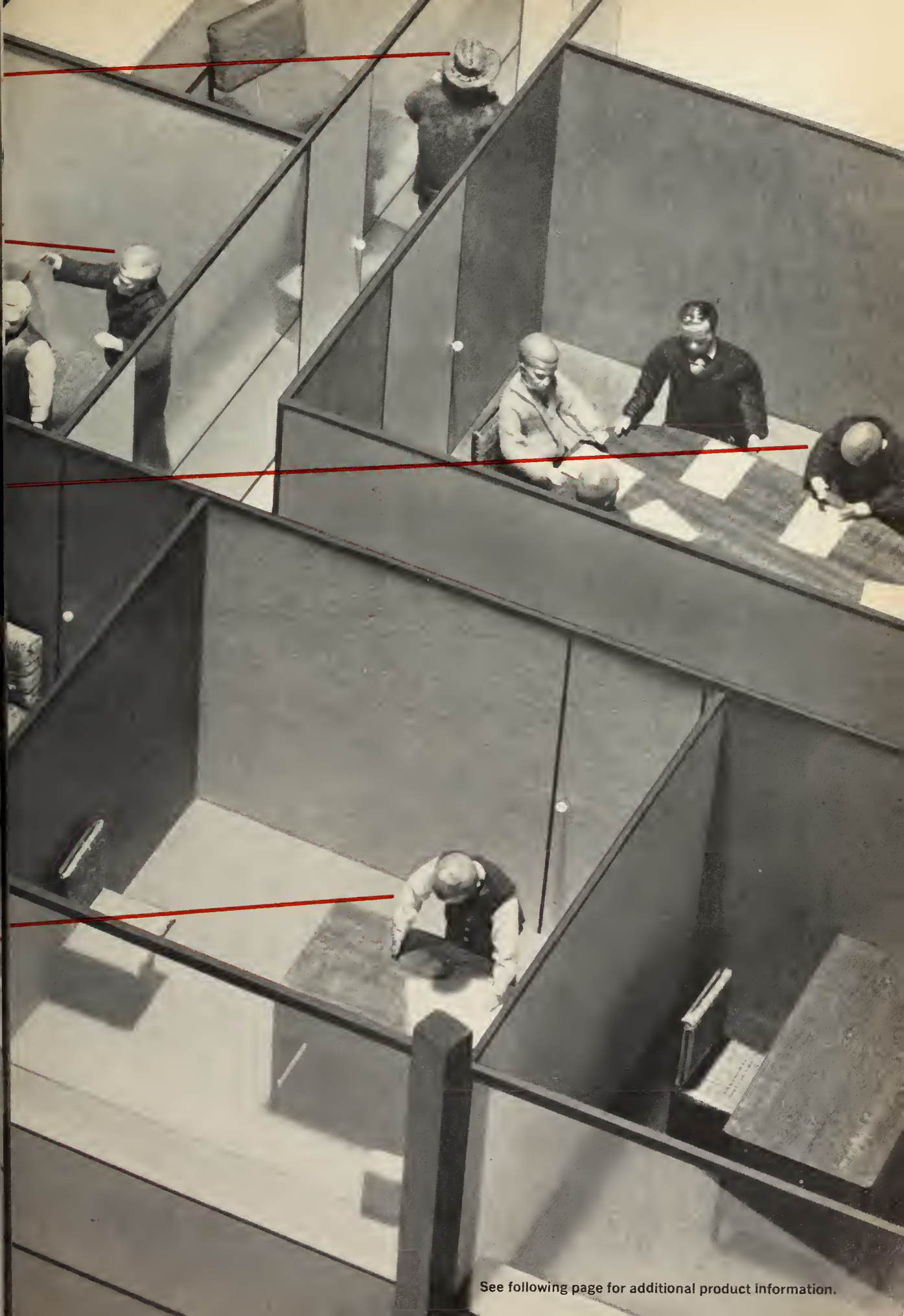
He just can't seem to settle down to his work.



for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ



See following page for additional product information.

When the agitated businessman goes to work...

Anxiety that seriously interferes with the individual's performance at work, at home, or in the community may be regarded as *moderate* to severe in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

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for

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- ASTHMA
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The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
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Phenobarbital, Caution: May be habit forming...	21 mg.
Ephedrine HCl	16 mg.

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Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

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DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.





Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of Tofrānil and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before Tofrānil may be substituted. Initial Tofrānil dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardi
arrhythmias have occurred in hy
thyroid patients and in patients r
ceiving thyroid medication when
Tofrānil was added to the regime
Imipramine may block the pharm
cologic activity of guanethidine
other related adrenergic neuron-
blocking agents.
The drug is not recommended a
present time in patients under 1
of age.
Adverse Reactions: Dryness of t
mouth, tachycardia, constipatio
turbances of accommodation, sv
ing, dizziness, weight gain, urina
frequency or retention, nausea a
vomiting, peripheral neuritis, mil
parkinson-like syndrome, tremo
rare cases of falling in elderly pa
tients, confusional states (with s
symptoms as hallucinations and
orientation), activation of psych
schizophrenics and agitation (in

When a milestone in life is marred by depression...



Often in the mind of the lonely, widowed, depression-prone individual, she's not gaining a daughter...she's losing a son. The occasion may be marred by such symptoms of depression as feelings of sadness, incapacity, helplessness and hopelessness.

In about 3 out of 4 cases, Tofrānil relieves symptoms of primary depression.

As maintenance therapy in primary depressive illness, it helps prevent relapse.

Although toxic reactions severe enough to require discontinuation of Tofrānil are uncommon, in patients with cardiovascular disease, thyroid disorders, increased intraocular pressure, or in those receiving anticholinergics (including antiparkinsonism agents), the special precautions listed in the Prescribing Information should be carefully observed. The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated.

Tofrānil® imipramine hydrochloride
Geigy

omanic and manic episodes)
ay require dosage reduction
addition of a tranquilizer or
ry discontinuation of the drug,
orm seizures, orthostatic
sion and substantial blood
e fall in hypertensive patients,
, transient jaundice, bone mar-
ression including agranulocy-
nsitization and skin rash
g photosensitization, eosino-
nd mild withdrawal symptoms
en discontinuation after pro-
reatment with high doses.
nal hormonal effects (im-
, decreased libido, and estro-
ects) may be observed.
-like effects may be more
ced (e.g. paralytic ileus) in
ble patients and in those
ticholinergic agents (includ-
arkinsonism drugs).
nt Adult Dosage: Initially,
aily, increased, if necessary,
to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Tofrānil: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)46-850-C
For complete details, please refer to the full Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

If hypothyroidism leaves your patient feeling like this...

consider

LETTER®

(SODIUM LEVOTHYROXINE, ARMOUR) TABLETS

Synthetic Thyroid Replacement Therapy



Letter® provides all the advantages of the synthetically pure chemical sodium levothyroxine. Dosage is precise and potency is consistently uniform.

and

Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

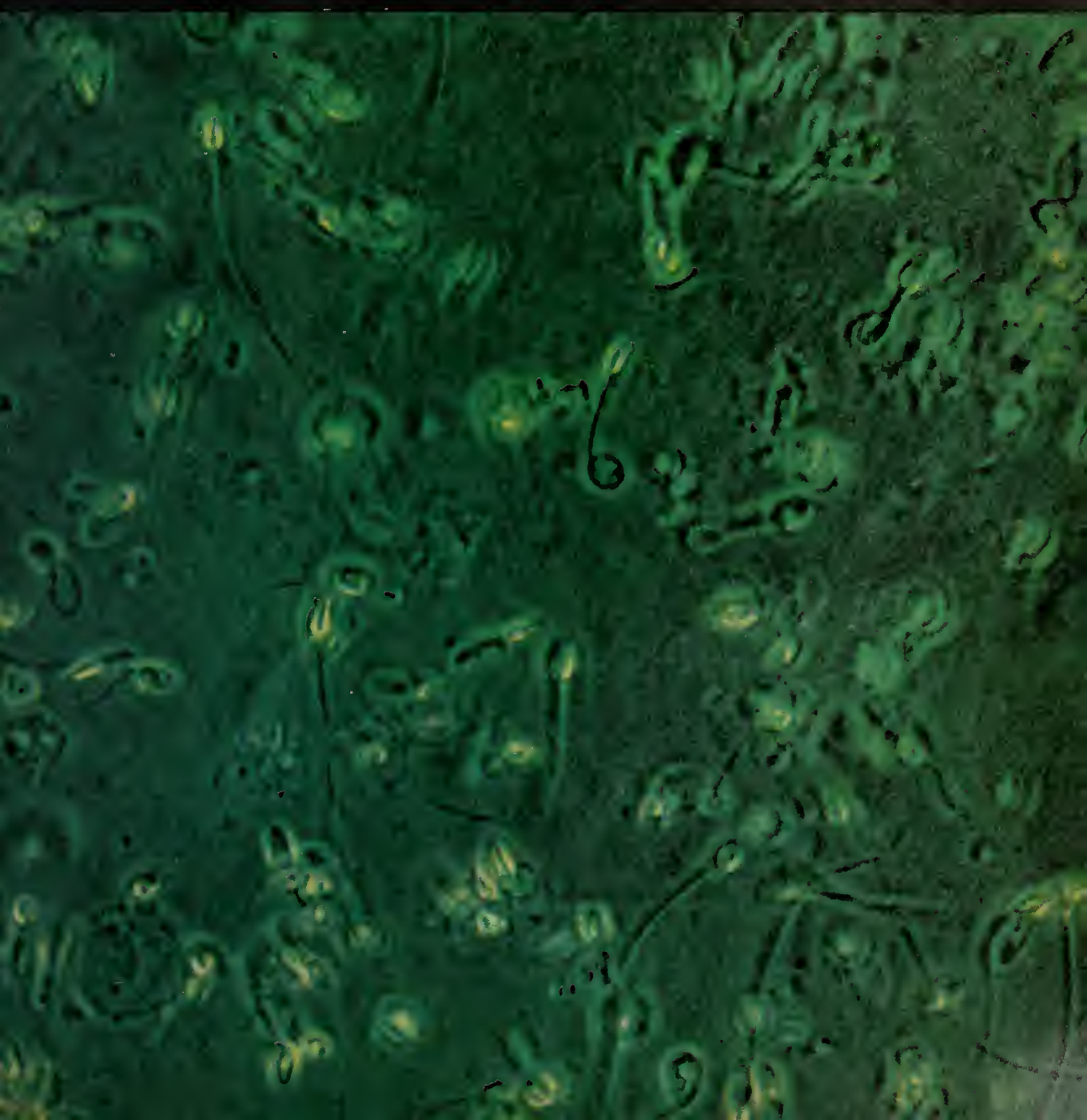
Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

ARMOUR PHARMACEUTICAL COMPANY • CHICAGO, ILLINOIS

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg + mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Prescribing Information

Contraindications: Patients with any symptoms or history of thrombophlebitis, pulmonary embolism, liver dysfunction or disease, carcinoma of breast or genital organs, or undiagnosed vaginal bleeding.

Warnings: Discontinue medication pending examination if there is sudden partial or complete loss of vision, proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. The safety of Norinyl-1 in pregnancy has not been demonstrated. If a patient misses two consecutive periods, pregnancy should be ruled out before continuing the medication. If she has not adhered to the prescribed schedule, pregnancy should be considered at the first missed period. Active ingredients of oral contraceptives have been detected in the milk of mothers who received these drugs; the significance to infants has not been determined.

Precautions: Pretreatment physical should include examination of the breasts and pelvic organs, as well as a Papanicolaou smear. If endocrine or liver function tests are abnormal during therapy, repeat tests are recommended after the drug has been withdrawn for two months. Following administration of drug, preexisting uterine fibromyomata may increase in size. Careful observation and caution are required for patients with symptoms or history of epilepsy, migraine, asthma, cardiac or renal dysfunction, cerebrovascular accident, psychic depression, and diabetes. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. Possible long-term effects of the drug on pituitary, ovarian, adrenal, hepatic or uterine function must await further studies. The physician should be alert to the earliest manifestations of thrombophlebitis and pulmonary embolism. The drug should be used judiciously in those young patients in whom bone growth is not complete. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask symptoms of the climacteric. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression. Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation posttreatment, premenstruallike syndrome, changes in libido, changes in appetite, cystitislike syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, and itching. The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has neither been established nor disproved): thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory tests may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

norethindrone — an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

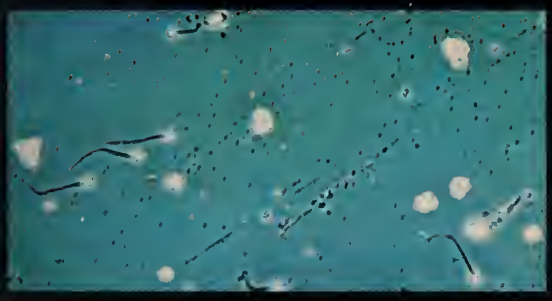
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

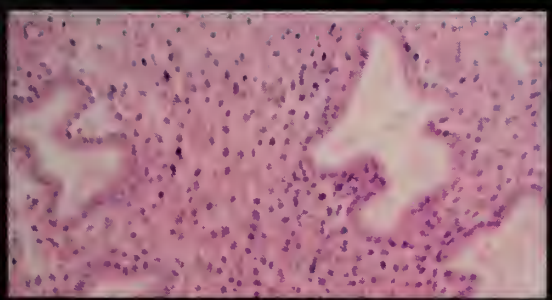
Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.



Spermatozoa appear healthy, active, freemoving.

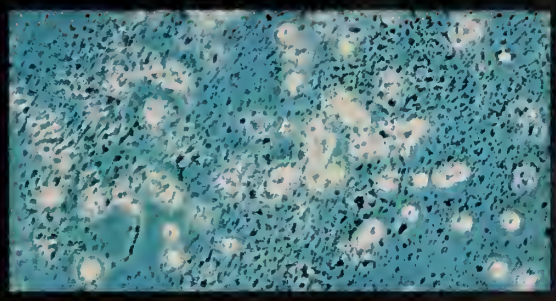


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

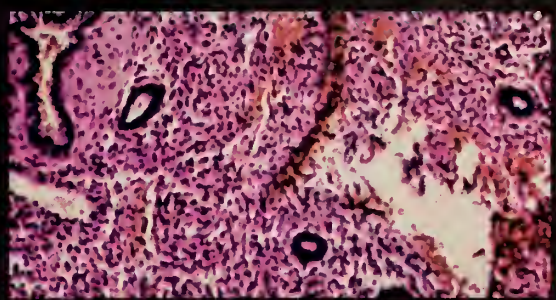
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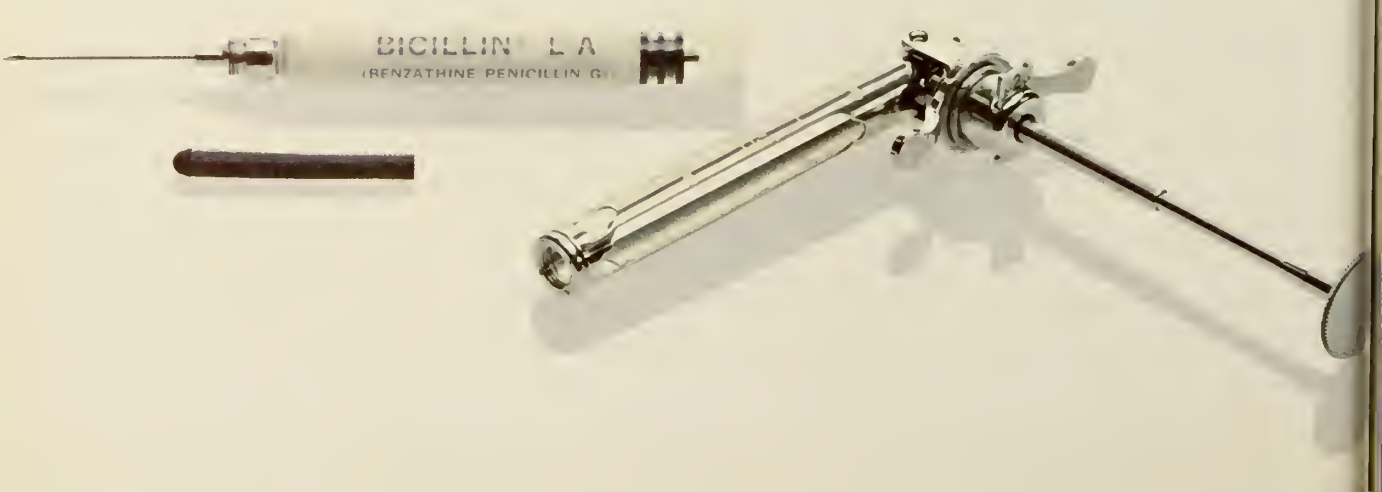
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The Journal
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Maine Medical Association

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Alterations in Cell Respiration Associated With Genetic Muscular Dystrophy in Mice*

John L. Howland, Ph.D., and Alice B. Seymour

Hereditary muscular dystrophies include a number of diseases characterized by progressive loss of muscle function and dramatic alteration in structure and biochemical properties of muscle tissue. Many studies have centered on the manifold alterations in enzyme activity levels in diseased muscle as well as the appearance of enzymes, normally associated with muscle, in the bloodstream.[1] Inasmuch as extensive destruction of muscle occurs, studies of enzyme activity often reveal the influence of gross morphological disorder rather than leading to discovery of a primary biochemical cause. For this reason, it would be of interest to find biochemical alterations in non-affected tissues of individuals with these diseases, as such alterations would probably reflect biochemical consequences of the primary genetic event, rather than massive destruction of the tissue itself.

Recent studies by Folkers and coworkers[2] have indicated a favorable response of genetically-dystrophic mice to therapy with a homologue of the substituted dimethoxy benzoquinone, ubiquinone. They suggest that the genetic defect resulting in dystrophy may be associated with the pathway for ubiquinone biosynthesis. Since ubiquinone is a component of the respiratory chain in animal mitochondria, it is reasonable that a defect in its synthesis should lead to profound changes in cellular oxidative ability. Moreover, as ubiquinone is found in mitochondria from a variety of tissues and not only muscle,[3] it is possible that the defect would be expressed in the oxidative capability of tissues other than muscle. This communication reports preliminary results comparing the oxidative activity of liver mitochondria from normal and dystrophic mice.

*From Department of Biology, Bowdoin College, Brunswick, Maine 04011. Supported by a grant from the Maine Heart Association and Grant GB5460X from the National Science Foundation.

Materials and Methods

Genetically dystrophic mice of the strain 129-B6-dy were obtained from the Jackson Laboratory, Bar Harbor, Maine. Mitochondria were isolated from mouse livers according to the method of Myers and Slater[4] with 0.25 M sucrose as isolation medium. Oxygen consumption was measured with a Gilson Medical Electronics Oxygraph which employs a vibrating platinum electrode. The standard reaction mixture contained 15 mM KCl, 2mM EDTA, 50 mM Tris-HCl, 5 mM Mg. Cl_2, 10 mM phosphate, and other components as stated, in a final reaction volume of 2.0 ml. Oxidation was measured at 25° and at pH 7.4. The protein concentration of the mitochondrial suspension was measured using biuret reagent.[5] In all cases, mitochondria were isolated from the livers of a dystrophic mouse and its normal litter mate simultaneously, and the experiments were carried out in an identical fashion. All reagents were of highest obtainable purity and were dissolved in glass-distilled water.

Results

Ubiquinone has been identified as a respiratory electron carrier in mammalian mitochondria[6] and it might be expected that a defect in its synthesis should lead to a diminished respiratory activity. Examination of Table 1 leads to a quite different conclusion, showing a substantial increase in oxidation rate in dystrophic mitochondria when compared to normal. This table reports experiments with liver mitochondria respiring without added electron source as well as in the presence of pyruvate. The increase in the dystrophic case is noted both in the presence and absence of adenosine diphosphate (ADP) and in the second experiment, it is seen that the endogenous respiration (that in absence of added substrate) is largely abolished by the addition of ro-

TABLE 1

RESPIRATION BY MOUSE LIVER MITOCHONDRIA: NORMAL AND DYSTROPHIC

Additions	*muatoms/min/mg protein*	
	Normal	*Dystrophic*
Exp. 1		
none	4.45	11.10
+ 25 mM Na pyruvate	7.35	13.20
Exp. 2		
none	6.3	9.3
+ ADP, 1mM	17.4	23.4
+ ADP + rotenone, 12 uM	0.15	0.21

TABLE 2

EFFICIENCY OF ATP SYNTHESIS COUPLED TO PYRUVATE OXIDATION

Source	*Oxygen uptake uatoms/min/mg*	*ATP:O Ratio*
Normal	0.0121	1.39
Dystrophic	0.0137	1.36

tenone which inhibits NAD^+-linked oxidations. It should be added that the increase in respiratory activity of liver mitochondria from dystrophic mice has been noted in a large number of experiments using several substrates and in a second strain of dystrophic mouse, as well (129 Re dy). This observation is similar to an earlier finding of higher oxygen uptake in dystrophic chick muscle, where, however, the possibility of uncoupling existed and where the fact of degenerative changes in muscle rendered results somewhat ambiguous.[7]

Since ubiquinone has been suggested as a possible intermediate in oxidative ATP synthesis,[8] it might be argued that the increase in respiratory rate be due to a loss or respiratory control or "uncoupling." This, however, does not appear to be the case, as dystrophic mitochondria respire more rapidly in the presence and absence of adenosine diphosphate when compared to mitochondria from a normal mouse. In addition, it may be seen in Table 2 that the ability to form ATP as measured as the ATP/O ratio is essentially the same in the dystrophic and normal condition. The elevated respiratory rates of dystrophic mitochondria are seen again in this table.

Although these results are of a preliminary nature, it seems clear that the condition of muscular dystrophy includes easily demonstrable biochemical changes in a tissue, the liver, which does not undergo gross degenerative changes. This conclusion, in turn, leads to the possibility that this set of diseases could profitably become regarded as affecting a wide range of cells, while producing degeneration only (or most visibly) in muscle. On the other hand, it is possible that the changes noted in liver mitochondria are of a secondary character, resulting, in some fashion, from primary alteration in muscle metabolism.

In either case, it is clear that further studies are required to identify the mechanism of the increased oxygen consumption and that such investigations are likely to shed new light on involvement of non-muscle tissue in this extremely complex set of diseases.

SUMMARY

1. Liver mitochondria from genetically-dystrophic mice are observed to respire at a higher rate than those from normal animals.

2. The higher respiration does not result from uncoupling of oxidative ATP synthesis which is unimpaired in dystrophic mitochondria.

3. It is suggested that liver tissue may exhibit biochemical changes associated with the disease, while failing to show gross degeneration. If this is the case, then further studies are justified on the grounds that many of the biochemical changes noted in dystrophic muscle are probably associated with degeneration *per se* and do not represent instructive avenues toward the understanding of these diseases.

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ANNUAL MEETING DATES FOR YOUR 1968 CALENDAR

Maine Medical Association, June 9-11, 1968 at The Samoset, Rockland, Maine

American Medical Association, June 16-20, 1968, San Francisco, California

Acute Glutethimide Poisoning Managed by Peritoneal Dialysis

WALTER G. FREY, III, M.D.*

Glutethimide ("Doriden®") poisoning is common.[1–10] Treatment by hemodialysis has been emphasized in those large medical centers from which most of the published data originates.[1–7] Smaller community hospitals without hemodialysis equipment must also be prepared to handle these emergencies. The following case illustrates the successful management of severe intoxication with peritoneal dialysis. This paper compares for the first time renal excretion and peritoneal dialysis removal of the drug.

CASE REPORT

W. B., a 43-year-old male unemployed truck driver and kitchen helper, was brought to the White River Junction VA Hospital by ambulance at 2 a.m. in coma. It was learned from the patient's mother and his divorced wife that he had been treated several times at the State Hospital for alcoholism and misbehavior. Two hours earlier he had arrived intoxicated at his former wife's door, brandishing a vial of pills which he threatened to swallow if not admitted. The door remaining closed, he dramatically gulped the contents and in five minutes was seen to collapse unconscious.

The now empty vial bore another hospital's label, and a phone call quickly established that its contents had been thirty 0.5 Gm. Glutethimide tablets prescribed a few days previously for the patient's stepfather.

Physical examination showed a B.P. 110/85, pulse 90 reg, temperature 97°, respirations 24/min. and there was an odor of alcohol on his breath. There was no response to painful stimuli and no deep tendon reflexes were elicited. There were no abdominal, cremasteric, plantar, or gag reflexes. The pupils were widely dilated but reacted very sluggishly to light. The bladder was distended, and a liter of unremarkable urine was drained when an indwelling catheter was inserted.

The rest of the examination was normal with no evidence of head or body trauma. The patient appeared to be ventilating well.

Serum drawn on admission was subsequently reported to show 3.4 mg.%. Glutethimide. Initial blood hemoglobin, hematocrit, white cell count, differential, sedimentation rate, BUN, electrolytes, urinalysis were within normal limits.

Peritoneal dialysis[11] was started about 3 hrs. after admission and five hours after the time of drug ingestion. Over the next 64 hours, 62 liters of dialysis fluid flushed the patient's peritoneal cavity. Two liter exchanges were performed every 2 hours. Each liter of commercial dialysis fluid contained 15 gms. of Dextrose, 5 gms. of sodium lactate, 5.6 gms. of sodium chloride, 260 mg. of calcium chloride and 150 mg. of magnesium chloride, to which 4 milliequivalents of potassium were added. 64,060 cc of dialysate was eventually recovered resulting in a negative balance of 2060 cc.

Generous intravenous fluid therapy was maintained at 3500 cc/day. With a urinary output of 2200 cc/day, the patient's weight remained stable.

Coma persisted for 52 hours. During this period his deep tendon reflex patterns varied markedly from complete areflexia to intermittently present knee and ankle jerks. A Babinski response was elicited periodically on the left. On several occasions he opened his eyes with disconjugate movements. There were also brief episodes of coughing and groaning, interspersed with longer periods of deep coma and complete unresponsiveness.

The patient's respiratory rate gradually and steadily increased to 40/min. within 12 hrs. of admission and had risen to 50/min. 24 hrs. after admission. This extreme tachypnea persisted for another 24 hrs. before gradually and steadily declining to 18/min. at the end of 72 hours. His respirations were extremely shallow and rapid (like those of a dog panting in the July sun). Arterial blood gas studies were performed during the height of this tachypnea and showed relatively benign values – pH 7.39, pCO_2 42 mm Hg, O_2 sat. 85% with Hb 15.4 gms.%, Hct. 44%.

Because of body temperature elevation to 102°, antibiotics were instituted and tracheostomy was performed to ease the suctioning of copious purulent pulmonary secretions.

After 52 hours the patient rapidly became alert and responsive without further lapses. Dialysis was discontinued at 64 hrs. and the tracheostomy tube removed the next day, following which an uneventful recovery was maintained.

In retrospect, the patient admitted the Glutethimide overdosage as a foolish impulse and refused psychotherapy. He was discharged 12 days after admission.

The amount of Glutethimide excreted in the urine during the 1st 72 hrs. was later reported to total 130 mg. (65 mg. on the 1st day, 58 mg. on the 2nd day, 14.5 during the 3rd day). During the same period of time, 705 mg. was recovered from the dialysate fluid.

DISCUSSION

Glutethimide is a widely-used soporific drug whose dangers were initially minimized or unrecognized by the manufacturers or prescribing physicians. With increasing use and popularity it has become evident that there is no particular advantage in using this drug in preference to more traditional sedatives. Poisonings have frequently been reported in the medical literature.[1–10] The difficulty in management of overdosage and the frequency of fatalities has been emphasized. In the most extensive review to date, Maher[1] reported a 70% mortality after ingestion of 12 gms. or more of Glutethimide including those patients who underwent hemodialysis. The mortality in reported cases of Glutethimide poisoning is 4 times that of poisoning due to Barbiturates. The low margin of safety, occasional side effects, potentiation by alcohol, and likelihood of excessive use by psychoneurotics make it difficult to see why Glutethimide is still being used. Nevertheless, it was the 6th most popular sedative prescribed in 1955, only a few years after its introduction.[8] There is no evidence to sug-

*Assistant Chief of Medicine, Veterans Administration Hospital, White River Junction, Vermont and Assistant Clinical Professor of Medicine, Dartmouth Medical School, Hanover, New Hampshire.

gest that it is less frequently used at present. A survey of 6 pharmacies in the area immediately surrounding our hospital (White River Junction, Vt., Lebanon, N. H., Hanover, N. H.) serving a population of 20,000 people showed that approximately 3,500 one-half gram tablets were dispensed each month. This adds up to 20 Kilograms yearly, or the potential for well over 1,000 fatal doses in a sparsely populated rural area (enough to kill 5% of the population).

The nearest medical center equipped with hemodialysis is 130 miles distant, and the hazards of transportation of a comatose patient 3 hours by ambulance at night (even if transfer were arranged) are obvious to any physician.

Peritoneal dialysis is simple and can be performed by any skillful physician in a community hospital prepared for this type of emergency by having dialysis fluid on hand and staffed by trained nursing personnel.

The effectiveness of peritoneal dialysis in Glutethimide poisoning is not documented in the literature. Maher's[1] extensive review included 3 cases in which peritoneal dialysis was used, but details were lacking. Hemodialysis has been emphasized as the only effective treatment.[5] This emphasis is obvious since the centers reporting a large collection of cases are also likely to be equipped with a renal unit and hemodialysis equipment, and there is no doubt about the efficiency of hemodialysis, when available. That there are complications following the use of hemodialysis equipment is also obvious (the need for anticoagulants and banked blood during the hemodialysis, and the hazards of occasional renal shutdown and hemolysis seen following its use.[1,6,10])

Peritoneal dialysis is not as efficient by comparison, but it can facilitate the removal of the drug. Five times as much Glutethimide was removed by the peritoneal route as was excreted by the kidneys during our patient's period of drug-induced coma.

The concentration of Glutethimide in the dialysis fluid of our patient (1.1 mg%) was almost identical to that of a case referred to by Barbour,[13] who also recommended peritoneal dialysis in Glutethimide poisoning.

The serum Glutethimide level of 3.4 mg.% found on admission indicates very severe intoxication and is consistent with the well-documented ingestion of 15 gms. Maher et al[1] found a 40% mortality in those patients with a serum level over 3.0 mg.%, and a 70% mortality in patients who ingested more than 12 gms. of Glutethimide (even when hemodialyzed).

The total amount of Glutethimide recovered in our patient represents only a small fraction of the amount ingested (6%), but this is not inconsistent with reported data on other poisonings,[1,3,12] and reflects the lack of knowledge concerning this drug's tissue storage and metabolic pathways. A fall of serum Glutethimide levels to 1.0 mg.% or less has been noted to coincide with return to consciousness.[1] On the other hand, most reported cases[1] were still comatose with serum levels above 1.1 mg.%. Therefore, the difference between consciousness and coma has been associated with changes representing only a few milligrams of the drug in the entire intravascular compartment. It is not unlikely that even the comparatively inefficient method of peritoneal dialysis may play a decisive role in extracting a small *but critical* amount of the ingested over-dosage.

Nor should peritoneal dialysis be considered such a far second to hemodialysis when one realizes that it can be initiated immediately and maintained continuously for a number of days without much procedural hazard.[13,14] The difference in clearances is compensated by the longer period of application and earlier initiation possible with peritoneal dialysis. The manufacturers and distributors of Glutethimide ("Doriden") dismiss peritoneal dialysis as "of no proven value"[15] in the treatment of acute overdosage. The experience reported here contradicts this opinion.

Our patient demonstrated some typical and other atypical signs of acute Glutethimide poisoning. Typical was his changing neurological pattern – sometimes appearing to be on the verge of regaining consciousness before lapsing back into deep coma. The presence of a Babinski reflex has been noted in one other reported case.[1] Tachypnea of the degree noted in this patient seems very unusual. Persistence of a respiratory rate of 50/min for 24 hours is not the usual state of affairs even in the presence of moderate respiratory infection with slight anoxia. The fact that his arterial pCO_2 and pH were normal at the height of this extreme tachypnea reflects the shallow panting nature of his respiratory exchange. His respirations gradually fell to normal as he regained consciousness, suggesting an atypical drug-induced central respiratory drive.

Gastric lavage is a cornerstone of the therapeutic attack on most cases of oral drug poisoning, but cases of fatal apnea have occurred while lavage was being attempted in Glutethimide poisoning.[1] It probably should be attempted only after insertion of an endotracheal tube or tracheostomy. Use of a Mannitol (Osmitrol®) diuresis might promote urinary excretion of the drug, but was not performed in this patient, whose daily urinary output was nevertheless between 2 and 2½ liters.

Recent experimental work has demonstrated that extraction of Glutethimide during peritoneal dialysis may be increased fivefold by the substitution of a lipid emulsion dialysate for the conventional aqueous solution.[16]

Summary

A patient who ingested 15 gms. of Glutethimide was treated with peritoneal dialysis. Serum, urine, and dialysate Glutethimide levels were determined. An unusual sign was persistent extreme tachypnea without arterial pH or pCO_2 changes.

Enormous quantities of Glutethimide are currently being prescribed by physicians in northern New England without access to hemodialysis. They must be pre-

Continued on Page 10

Special Article

Professional Education in the Control of Cancer*

HAROLD S. DIEHL, M.A., M.D., Sc.D.**

When your program committee invited me to participate in this meeting and to discuss "Closing the Gap in Professional Education" I was not quite sure what the title meant: Closing the Gap – what gap? The gap between ignorance and understanding or the gap between understanding and action. In view of this vagueness, I am like the man who in accepting an invitation to speak at the banquet of a big organization sent the program committee three titles and asked that they indicate their preference. He added, however, that "My speech will be the same no matter which title you select."

Even the subject "Professional Education" had me troubled because I was not sure what was meant by professional education. The first thought that came to mind was the education of physicians. But what about the education of dentists, of nurses, and of other professional workers in the field of health, all of whom have roles to play and have responsibilities in the control of cancer? And probably most important of all, what about the education of public health workers concerning their opportunities and responsibilities in cancer control?

Years ago public health departments concentrated their efforts upon the control of communicable diseases. Today chronic degenerative diseases – such as heart disease, cancer and stroke – have become the leading causes of death and disability in this country. They are therefore, logically and properly, becoming the major concern of health departments.

Of these diseases, cancer is the one with which this Public Health Cancer Association is concerned – a disease which has been taking an increasing toll of life year after year and which in 1965 was responsible not only for 297,588 (almost 300,000) deaths but also for a tremendous, although unmeasured amount of illness and disability.

Cancer is still a frightening and devastating disease and the continuing increase in its annual toll of deaths is discouraging. On the other hand, it is said – and justifiably so – that the *possibilities* of preventing illness, disability and death from cancer are greater than from any other disease in this country.

Of the 580,000 cases of cancer diagnosed annually in this country, approximately one-third or 197,000 are alive at least five years after the initial diagnosis. This is heartening but at least half of the total or an additional 97,000 cancer deaths each year could be prevented if currently available methods of early diagnosis and treatment were universally and effectively utilized. This is a great challenge to health departments and to the health professions but an even greater challenge is the possibility of preventing each year more than 75,000 of these fatal cancers from developing.

I have in mind primarily the 75,000 to 80,000 excess deaths from cancer that occur each year among cigarette smokers in comparison to nonsmokers. Most of these are cancers of the lung, concerning which Dr. Brian MacMahon, Professor of Epidemiology at Harvard, stated several years ago "more than 90% would not occur except for cigarette smoking." Many cancers of the skin are due to excessive exposures to sunlight or to carcinogenic chemicals and so could be prevented. Likewise, it is probable that some of the cancers of the reproductive tract could be prevented by cleanliness and improvement in personal hygiene.

We have, therefore, tremendous possibilities for the control of cancers by public health measures. But how can these possibilities be realized, and what contribution can professional education make to the accomplishment of this?

The American Cancer Society has long had well developed national and local programs for both professional and lay education. Pamphlets, films, exhibits, etc. have been made available to professional groups, to schools and to the general public through local units and state divisions as well as from the National Office of the Society. I might add that a number of excellent new films for professional and for public education have recently been released.

The objective of professional educational programs is to supplement the role of medical, dental, nursing and public health schools and the professional societies in providing physicians, dentists, nurses and other health personnel working in the cancer field with information concerning new and effective measures for the control of cancer. On the other hand, the provision of information is only one objective of professional education. The word "education" means to educe or to bring out latent abilities, skills and capacities. In addition to providing data, the information and the means for the education of physicians, dentists, nurses and other health personnel, professional education programs must persuade or stimulate them to carry out new and special procedures in the prevention, diagnosis and treatment of cancer and to recognize the importance of their individual roles in determining the extent to which cancer is controlled.

In other words, information unless accompanied by

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effective action is valueless. The big question is how to obtain action as well as to disseminate information.

Cancer is a disease that we cannot control by quarantine, isolation, immunization nor by the public health engineering techniques that have been so effective in the control of communicable diseases. In other words, to control, prevent and otherwise reduce the toll of cancer we must be able to influence the action of the individual. That this is exceedingly difficult is obvious from the amount of cigarette smoking in the corridors and the exhibit and meeting rooms of these public health meetings.

Much of the effort in professional educational programs must be concerned with the cultivation of attitudes: hopeful attitudes, concerning the curability and the possibility of preventing and of curing cancer and the importance of early detection and treatment. Unless the medical and allied professions utilize available knowledge concerning the diagnosis and treatment of cancer, lives will be needlessly lost and unnecessary suffering continue. It is essential, also, that members of the medical and allied health professions actively support the education of the public as to what the individual can do to prevent cancer and to assure early detection and proper treatment. Because the public rightly looks to the medical and allied health professions for advice and guidance in measures to safeguard health, the members of these professions have prime responsibilities for furthering public education for this purpose.

How then can we "close the gap" between professional education and effective action in cancer control? The beginning must be made with students in the professional schools of public health, medicine, nursing, dentistry, etc. These students should know what cancer is; what is currently known about its cause or causes; how it starts; how it spreads; what can be done to prevent it; how it can be diagnosed while it is still in a curable stage; how it should be treated and how to avoid cancer quacks and charlatans. Public health students should learn also what measures and programs health departments can conduct, sponsor or encourage for the control of cancer.

Such information is basic, *but* equally, and probably more important are the measures that these students see in use for the control or the prevention of cancer. It is essential that students know that deaths from cancer of the cervix could be eliminated if adult women would have regularly annual Papanicolaou smear examinations; and if they see this procedure utilized as an integral part of physical examinations in the clinics and hospitals in which they are taught, they will almost certainly utilize it later in their various areas of professional responsibility. However, no matter how well they are taught, it will have little carry-over into practice if they do not see the procedure utilized as an integral part of accepted health practice.

The same is true of cancer of the colon and rectum. It is agreed that routine proctosigmoidoscopic examinations could lead to the diagnosis of most of these cancers when they are still localized and could be completely and successfully removed. All health service personnel should know this and medical students should learn how to perform these examinations. However, if they do not see them utilized in their teaching clinics and hospitals, the knowledge about them will have little influence upon their own practices.

The same is true of breast examinations of women and of the instruction of women in the technique of breast self-examination.

And finally, how important for the control of cancer is the example that health personnel set in regard to cigarette smoking. How can we expect the general population or our students in the health sciences to take seriously the Surgeon General's statement that cigarette smoking is the greatest known cause of illness, disability and premature death in this country if they observe public health personnel, physicians, dentists, nurses, etc. smoking cigarettes? Their doing so gives credence to the efforts of the cigarette industry to convince the public that this is merely "a health scare" and that it need not be taken seriously.

In conclusion, I would emphasize that "to close the gap" between professional education about cancer and effective action for cancer control requires not only information but examples of good public health and medical practice in cancer control.

At the World Conference on Smoking and Health in New York last month, Dr. Karl Evang, Director-General of Health Services of Norway, said: "An example is better than 100 statements even if they are correct." And Sir George Godber, Chief Medical Officer of the British Ministry of Health, said: "It is never too *late* to stop smoking for one's self; (and) it is never too *early* to stop smoking for those who may influence others in favor of it."

In 1967 in this country, about 97,000 patients will die from cancer whose lives probably could have been saved by earlier diagnosis and better treatment. And an estimated 75,000 more who will die from cancer would not have developed the disease if they had not smoked cigarettes.

Such figures represent tremendous opportunities and grave responsibilities to all health personnel concerned with the control of this dread disease.

Summary of Actions of the House of Delegates

American Medical Association, 21st Clinical Convention, November 26-29, 1967, Houston, Texas

HOUSTON, TEXAS – November 29, 1967 – The need for "positive leadership" and "visible action" by the medical profession and all other members of the health team was emphasized to Delegates at the 21st Clinical Convention by Milford O. Rouse, MD, President of the AMA.

"The future of the individual physician, of patient care and of the methods by which it will be made available to all people do not depend on our efforts alone," the President said in his keynote address during Sunday's opening session. "They depend also on the future attitude of the nation toward free enterprise; on the degree of future national respect for individual initiative; and on the extent of future over-all acceptance of the concept that personal satisfaction and personal benefit are to be gained principally through personal endeavor."

Dr. Rouse pointed out that many things can be done only by government, or best by government, but added that many other things can be done only by private organizations and individual citizens working together.

The reason, he explained, is that actions of government often are necessarily negative. For example, Dr. Rouse said, "Government can pass laws against theft, but no law can make a people want to be honest. . . . Government can pass laws against drunkenness, but no law can make a people want sobriety."

However, he added, "Leaders in government understandably see it as their duty to do for the people of this country whatever they believe, or whatever they are told by citizen groups, is not already being done. . . . When private citizens abdicate their responsibilities and ask the government to do a job, government responds in the only way it can: it passes more laws. . . . And every time another law is passed, it means another small or large restriction on somebody's freedom."

As citizens, Dr. Rouse said, "we have this choice when facing a situation that needs correcting: we can do it ourselves; or we can ask the government to pass a law" and set up an administrative mechanism to enforce it.

In regard to specific, current problems – the cost of health care and the growing need for more effective cooperation among health care professionals and sub-professionals – Dr. Rouse stated that "I believe sincerely that we have reached a point . . . when we can no longer just cling to all of the traditions of our distinguished or devotion to excellence; but in the more material past. I believe the time has come for orderly, planned, meaningful change – not in the fundamentals of ethics features of efficiency, cost and methods of delivery" of health care.

"If we should fail to recognize the present as an opportunity for positive action . . . I believe we would fail not only ourselves, but the people of this country, more and more of whom need and want more and more of the services we are uniquely able to render.

"Let us not make it necessary," he concluded, "for anybody else to direct the furnishing of those services."

There was no lack of positive action in the Houston meeting, at which 238 out of 242 Delegates (98.3%) attended the final two sessions, dealing with 96 items of business, including 17 reports from the Board of Trustees; 20 from the four Standing Committees of the House; one special report each from the AMA-ERF and the Commission to Coordinate the Relationships of Medicine With Allied Health Professions and Services; and 57 resolutions from state medical societies or individual physicians.

Of those, the House adopted 43 without amendment; amended and adopted 22; referred 21; absorbed four into other adopted items; and rejected six.

Distinguished Service Award

Owen H. Wangensteen, MD, director of the Department of Surgery at University Hospitals, Minneapolis, was named the winner of the 1968 Distinguished Service Award.

The award will be presented to Dr. Wangensteen at the Annual Convention in San Francisco in June, 1968.

Under a change in the Bylaws, this is the first time the award winner has been selected at the Clinical Convention. Previously he was selected and the award was made at the Annual Convention.

AMA-ERF Institute for Biomedical Research

In a special report on the AMA Education and Research Foundation, Charles L. Hudson, MD, Immediate Past President of the AMA and President of the AMA-ERF, reported to the House that the Board of Directors of the AMA-ERF had "voted to endorse in principle the relocation of the Institute for Biomedical Research on, or contiguous to, the University of Chicago campus, and authorized the Executive Vice President, with appropriate other members of staff and the President and Secretary-Treasurer of the Foundation to negotiate a contract with the University of Chicago for consideration by the Board of Directors of the AMA-ERF."

The House approved the action of the Board of Directors of the AMA-ERF and endorsed "in principle" the relocation of the Institute "on or contiguous to the University of Chicago."

At the same time, the House requested the Board of the AMA-ERF "to present at each Clinical Convention a report on the projected budget of the Institute for Biomedical Research for the ensuing year and the amount of the projected contribution from the American Medical Association to the Institute during that period."

Medical Education

Several actions were taken relating to medical education.

One was adoption of the Board of Trustees' summary

of the Report of the Commission on Research. Fifteen recommendations were contained in the Commission report, two of which were seen as particularly significant.

Recommendation 12 encouraged research in the delivery of health care, "provided it is conducted under proper auspices and in accordance with sound research design and methodology." The House adopted it, with the understanding that such support "should not be interpreted to imply any criticism of the present studies of the delivery of health care." Present efforts are productive, but the medical profession "should not hesitate to make known its interest in continued studies to improve the methods and quality of health care delivery."

Recommendation 13 was addressed to correcting the imbalance between biomedical research and education caused by the "heavy but desirable federal support of research." It stated that "there should be allotted a greatly increased amount for operational expenses of medical schools, to be matched by those schools through private or local governmental sources."

Again the House concurred, stressing the fact that its approval of the recommendation changes the policy of the AMA with respect to federal support for medical education. The change results in "an honest recognition that federal financial support is now accepted by the American medical schools." However, in adopting the recommendation, the House "emphatically urges that a matching formula be used" to "encourage medical schools to retain their independence."

The House also adopted a resolution that the AMA, through its Council on Medical Education, "utilize all appropriate influences to restore teaching to its proper place of prominence in medical education" instead of giving the lion's share of attention, honors and contributions to research scientists; and adopted 12 guidelines for medical staffs in hospitals with intern and resident training programs.

Health Manpower

A report was adopted on the "Report of the National Advisory Commission on Health Manpower," which was submitted to President Johnson on November 20.

The report was necessarily brief, since there had not been time to study and evaluate the Commission report in any depth, but it pointed out that the Commission's approach to health care problems indicated recognition of the need for orderly procedures rather than harmful "crash" programs. The emphasis in most of the Commission report is to center responsibility on the professional groups best able to evaluate and plan in health areas, rather than on government and non-professionals.

The House adopted the preliminary report; voted to enlarge the AMA Committee on Health Manpower by four members to permit more careful and complete study in this area; and noted that copies of the complete Commission report will be sent to all Delegates and Alternates, requesting them to submit their comments to their constituent associations as soon as possible.

In addition, the House approved replacing the present AMA Commission to Coordinate the Relationships of Medicine With Allied Health Professions and Services with a new council of the Board of Trustees to be known as the Council on Allied Health Professions; and directed the Association to seek the establishment of a medically oriented federal Commission on Health Resources and Medical Manpower to assure properly balanced distribution of health personnel among government agencies, the armed forces and the civilian population.

Also with respect to health personnel, both professional and allied, the House asked that a report be made at the next meeting evaluating the foreign resident, intern and physician program; requested a study of the present professional liability implications in the use of allied medical personnel; and urged physicians to become acquainted with the programs of the American Association of Medical Assistants and to encourage their assistants to participate in its educational and certification programs.

Health Care

The House adopted a number of reports and resolutions relating to health care from the standpoint of the community and the individual patient.

One emphasizes that standards of medical care are set at the local level and calls attention to disturbing trends pointing to the possible establishment of medical care standards on a national basis.

Another commits the AMA to leadership in informing the public, the profession and other elements of the health care field as to practical means of moderating health care costs, the value of voluntary health insurance, expanding the medical manpower supply and improving the health care of the American people.

With respect to comprehensive planning of health facilities and services, the House urged state and local medical societies to emphasize a variety of activities to be undertaken in the area of over-all planning for governmental and private programs of health care, including "Continued effort by the medical profession to improve federal legislation in this area and to emphasize the importance of local control."

The House reaffirmed that the procurement, processing, distribution or use of human blood and other human tissue is a medical service and is not the selling of a commodity. The Board of Trustees and the state associations were urged to support legislative action at federal and state levels to implement this concept.

The use of monitoring, defibrillation and resuscitative equipment by registered nurses in cases of cardiac emergencies was supported, with provisions regarding the nurse's training and the procedures established by the hospital medical staff.

Alcoholism was identified as a complex disease and the House recognized that the medical components of this entity are medicine's responsibility.

Medicare and Medicaid

In regard to medicare, the House reaffirmed its support for direct billing under the federal program and adopted a resolution regarding the collection and public dissemination of figures on the administrative costs of medicare.

The House resolved that the AMA continue its efforts to provide for the implementation of Title 19 in a manner which recognizes "the physician's right to bill directly all patients, including Title 19 patients, and ai-

lows the physician or his patient to be reimbursed his usual, customary and reasonable fee for his professional services;" and that the Association actively seek changes in the law that will secure "equal and simultaneous application to all jurisdictions."

Other Legislative Matters

A resolution urging continuing opposition to S-2299, the Long drug bill, and a report detailing the current status of HR-12080, the Social Security Amendments of 1967, were adopted.

The House also adopted recommendations that the AMA arrange a meeting of state medical association representatives to plan regional conferences of physicians to discuss matters of special interest to state legislators; and that state associations invite key lawmakers to attend AMA conferences.

Also approved was a resolution that state associations establish active legislative task forces at the congressional district level to maintain an effective working relationship with congressmen.

Support for AMPAC was reaffirmed in a resolution that requested the Board of Trustees to seek additional ways of helping AMPAC enlarge its activities and its assistance to state medical political action committees.

Hospitals

Because both medicare and medicaid provide payment for medical care rendered to patients by residents, the House resolved that the Association should study the problem and develop guidelines that are acceptable to supervising physicians, teaching institutions and government agencies involved in the payment process.

In addition, with respect to hospitals, the House adopted resolutions:

— Proposing the acceptance of physicians on hospital Boards of Trustees as the most effective form of liaison between the medical staff and hospital governing authorities.

— Protecting hospital privileges through "due process."

— Calling for more effective liaison and better coordination between medical staffs and local medical societies.

— Pointing out the need for simplifying attendance requirements for maintaining membership on hospital medical staffs.

— Pressing for prompt revision of the JCAH ruling on the use of externs in non-university affiliated hospitals, with the incorporation of adequate safeguards to insure the quality of programs of extern education.

In addition, model articles of incorporation for hospital medical staffs were made available for distribution in response to requests.

AMA Organization and Procedures

A number of changes were made in the Bylaws:

— Chapter XIV, Section 3 (D) was updated, providing that four trustees will be elected annually, each for a three-year term and each limited to three terms.

— The terms in office of the President, President-Elect and Vice President all will begin and end at the close of the final session of the House of Delegates at the Annual Convention.

— Resolutions must be introduced to the House by a voting delegate.

— Nominations for Affiliate Membership in the AMA in classes (3), (4), (5) and (6) must be approved by the appropriate county and state medical society.

— A general officer's position is to be considered vacant if he misses six consecutive regular meetings of the Board.

— The House approved giving the Vice President voting rights on the Board.

Convention Sites

Sites and dates for future conventions will be:

ANNUAL

1968	San Francisco, June 16-20
1969	New York, July 13-17
1970	Chicago, June 21-25
1971	Atlantic City, June 20-24
1972	San Francisco, June 18-22
1973	New York, July 15-19
1974	Chicago, June 16-20

CLINICAL

1968	Miami Beach, December 1-4
1969	Denver, Nov. 30-Dec. 3
1970	Boston, Nov. 29-Dec. 2
1971	New Orleans, Nov. 28-Dec. 1
1972	Atlanta, November 26-29
1973	Anaheim, Cal., November 25-28
1974	Portland, Ore., December 1-4

AMA Objectives

The House adopted a statement of 11 purposes and responsibilities for the AMA, designed to define more clearly the over-all purpose as written in the Constitution: "To promote the science and art of medicine and the betterment of public health."

The entire statement follows:

The Purposes and Responsibilities
of the American Medical Association

It is the responsibility of the American Medical Association, as the representative of the American medical profession, to continue to foster the advancement of medical science and the health of the American people.

Its continuing purposes are to meet this responsibility through the following means:

1. By encouraging the further development of medical knowledge, skills, techniques and drugs; and by maintaining the highest standards of practice and health care.

2. By creating incentives to attract increasing numbers of capable people into medicine and the other health-care professions.

3. By advancing and expanding the education of physicians and other groups in the health-care field.

4. By motivating skilled physicians who have the art of teaching to apply themselves to developing new generations of excellent practitioners.

5. By fostering programs that will encourage medical and health personnel to serve voluntarily in the areas of need for medical care.

6. By developing techniques and practices that will moderate the costs of good medical and health care.

7. By seeking out and fostering means of making all health-care facilities – physicians' offices, hospitals, laboratories, clinics and others – as efficient and economical as good medical practice and attention to human values will permit.

8. By combining the utilization of the latest knowledge for prevention and treatment with the vital healing force of the physician's personal knowledge of and devoting to his patient.

9. By maintaining the impetus of dedicated men and women in providing excellent health care by preserving the incentives and effectiveness of unshackled medical practice.

10. By maintaining the highest level of ethics and professional standards among all members of the medical profession.

11. By continuing to provide leadership and guidance to the medical profession of the world in meeting the health needs of changing populations.

Additional Actions

A memorial to Percy E. Hopkins, MD, was read to the House and a copy was sent to Dr. Hopkins' widow. Dr. Hopkins served as a Trustee for seven years, the last four as its Chairman. He also served for eight years as a Delegate from Illinois.

The House reiterated its serious concern with respect to the Blue Cross Association's request for government funds for its research project on group practice.

Criteria for the evaluation of medical programs of national voluntary health agencies were adopted.

Three resolutions, referred to the Board, pointed out that many news stories criticizing the rising cost of health care place all or most of the responsibility squarely on physicians. As one of the resolutions put it, "Statistical reports relating to health care costs are misleading when they are referred to . . . as medical care costs; and . . . the improper labeling . . . may actually delay proper analysis of the several components."

ACUTE GLUTETHIMIDE POISONING MANAGED BY PERITONEAL DIALYSIS – *Continued from Page 4*

pared to handle patients with potentially fatal overdosage of this drug. Peritoneal dialysis is recommended as a readily available, easily applicable therapeutic tool in the management of severe Glutethimide poisoning.

We are indebted to Mr. Robert Halverson, Bureau of Laboratories, Vermont Department of Health, who performed the Glutethimide determinations.

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Code of Cooperation for Maine State Bar Association and Maine Medical Association

Whereas, the members of the Maine State Bar Association and the Maine Medical Association recognize that problems of co-operation between the medical and legal profession have arisen as a result of the increase in litigation involving personal injuries and duties of both professions to the public and to the administration of justice, and further recognize that medical-legal co-operation is necessary in order to maintain the proper attitudes of mutual respect of each of these learned professions for the other; and

Whereas, the Maine State Bar Association and the Maine Medical Association have appointed their respective committees to study the aforesaid problems; and

Whereas, said committees propose the following agreement as a proper one to be entered into by these professional associations and as one which will further the interests of those persons who are served by both professions;

Now, therefore, be it agreed:

ARTICLE I
Medical Reports

1. *Physician's Duties.*

A. To provide adequate information to the attorney requesting the same concerning the patient, including results of examination, diagnosis, tests, prognosis, and up-to-date bill for services rendered.

B. To supply such a report within a reasonable time after the same is requested.

C. To provide supplemental reports when any significant change occurs in the patient's condition or when requested by the attorney after a reasonable length of time has expired following a prior report.

2. *Attorney's Duties.*

A. To compensate promptly the physician for the report if said compensation is requested and to provide such compensation in advance if the physician so requests.

B. To provide the physician with an authorization signed by the patient permitting the physician to divulge the requested information to the attorney.

ARTICLE II
Conferences Between the Attorney and the Physician

1. It is agreed that it is mutually advantageous for the physician and attorney to confer in reference to a particular case prior to the time of trial.

2. Arrangements for such conferences should be made a sufficient time in advance of the trial so that the conference can be fitted in the schedule of the attorney and the physician. The physician may bill the attorney for the conference at the same rate which he would charge for treating a patient for a similar period of time. This bill should be paid promptly by the attorney and should not be contingent upon the success of the suit.

ARTICLE III
Court Testimony

1. Both parties recognize that there is a necessity for the dissemination of information to both professions concerning the time problems involved in court testimony. The Medical Association recognizes that the legal profession faces calendar problems, which include the uncertainty of dates in a fluid trial calendar. The Bar Association likewise recognizes that the physician's appointments are made in advance and that physicians are, in addition, faced with pressing medical problems which cannot be deferred.

2. *Attorney's Duties.*

A. The attorney should notify the physician seasonably to advise the physician of the proposed trial date.

B. The attorney should telephone the physician's office on the day prior to the proposed trial date to advise of the likelihood of whether the case will be reached.

C. Physicians should be kept "on call" and should be given at least one hour's notice of the time when they will be required to appear at the Court House. Physicians should not be asked to appear until attorney is reasonably certain that they will not have to remain at the Court House more than a short period of time before being allowed to testify. Attorney shall endeavor to obtain the physician's testimony as soon as possible after his arrival in the Court Room subject to orderly and proper presentation of the case.

D. In the event of settlement, the physician should be immediately notified of the fact that the case is settled so that his schedule is not interferred with to an excessive extent.

E. The attorney should not use a subpoena to secure the attendance of a physician in court unless the physician refuses to abide by the terms of this Agreement.

F. The physician should be promptly compensated for his appearance as an expert witness.

3. *Physician's Duties.*

A. The physician has an obligation to give testimony regarding his patient in court. If the physician undertakes the care of a patient and litigation ensues, the physician is duty bound to testify as to medical condition of that patient.

B. When given seasonable notice of the time at which he will be called upon to testify, the physician should make himself available at that time.

ARTICLE IV
Depositions of the Physician

1. In the event that the oral deposition of the physician becomes necessary, mutual agreements shall be made between the attorney and the physician as to the time and place thereof.

ARTICLE V
Physician's Bill for Medical Services Rendered to Patients

1. It is suggested that every attorney obtain authority from the client-patient to pay all medical bills in the event of a recovery upon trial or a settlement.

ARTICLE VI
Sanctions

1. A Medical-Legal Co-operation Committee shall be formed and composed of five (5) members of each of these associations who shall sit as a permanent committee. A quorum shall consist of a minimum of three (3) members of each profession.
2. Any physician or attorney aggrieved with the conduct of a member of the other profession in relation to a matter arising under or related to the terms of this Agreement may make a complaint in writing detailing the nature of the complaint and shall forward a copy of said complaint to each co-chairman of the joint committee and to the person against whom the complaint is lodged.
3. Upon receipt of such a complaint, the co-chairmen of said committee shall notify its members of a meeting of the same within sixty (60) days.
4. The committee shall inquire into the merits of the complaint and may request further information from either of the parties involved. The committee may then attempt to negotiate and arbitrate the dispute.
5. If the dispute cannot be arbitrated in a manner satisfactory to all parties concerned, this committee may, by majority vote, issue its opinion passing upon the conduct involved as proper or improper, as the case may be, and may further make a recommendation to the executive committee of the Maine State Bar Association in the event an attorney's conduct is disapproved, or the executive committee of the Maine Medical Association if a physician's conduct is disapproved.

ARTICLE VII
Social Relations

1. It is agreed that both associations shall endeavor to hold a joint social meeting at least once a year to foster and improve personal relationships between the two professions.
2. Both associations agree that they will expend efforts to explore further areas of co-operation between them, including the offering of seminars, lectures, etc., which will be instructive to the members of either or both associations.

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Campbell Soup Company, Box 265, Camden, N. J. 08101


HALT DIARRHEA!
SHERIFF

LOMOTIL®

TABLETS / LIQUID

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . . 2.5 mg.
(Warning: may be habit forming)
atropine sulfate . . . . . 0.025 mg.

Halts Diarrhea Promptly

in children with . . . Gastroenteritis ▪ Spastic bowel
Influenza-like infections ▪ Antibiotic-induced diarrhea

Lomotil helps get children with diarrhea off toast and tea and back to normal diets and normal activity with gratifying dispatch. ▪ Lomotil lowers intestinal motility and permits absorption of excess fluid. This usually controls diarrhea promptly. ▪ Moreover, lowered intestinal motility achieved with Lomotil often relieves the abdominal cramps and discomfort so distressing to children.

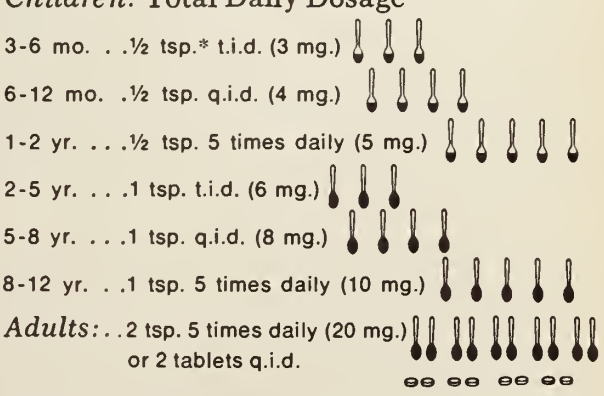
Precautions: Lomotil is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is recommended. Lomotil should be used with caution in patients with impaired liver function or those taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of the extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . .½ tsp.* t.i.d. (3 mg.)
6-12 mo. .½ tsp. q.i.d. (4 mg.)
1-2 yr. . . .½ tsp. 5 times daily (5 mg.)
2-5 yr. . . .1 tsp. t.i.d. (6 mg.)
5-8 yr. . . .1 tsp. q.i.d. (8 mg.)
8-12 yr. . .1 tsp. 5 times daily (10 mg.)
Adults: . .2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.



*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

SEARLE *Research in the Service of Medicine*


He's on the wagon...and

How well does Vistaril relieve the symptoms that plague an alcoholic during the recovery period? Doctors Knott and Beard of the Alcoholic Rehabilitation Unit, Tennessee Psychiatric Hospital and Institute, recently conducted a double-blind study comparing Vistaril and another well-established antianxiety agent with placebo in 60 chronic alcoholic patients.[1]

The investigators conclude: "It was the opinion of the staff that hydroxyzine was generally more effective than chlordiazepoxide, for the following reasons: hydroxyzine was equally if not more effective in reducing anxiety and tension and it produced less daytime sedation...."[1] (See results on succeeding pages.)

Here is new evidence that Vistaril can ease tension, allay anxiety in chronic, hospitalized alcoholic patients. *But you might also choose Vistaril for what it doesn't do.* Although not evaluated in this study, Vistaril is reported to be non-euphoriant, and its low toxicity makes it relatively safe. Best of all, Vistaril is non-habituating. To date, after more than ten years of clinical use, there have been no reports of dependency in patients receiving Vistaril.

With Vistaril, it is as easy to stop therapy as it is to start.

Vistaril®
(HYDROXYZINE PAMOATE)

the study:[1] Sixty chronic alcoholic patients were hospitalized and randomly assigned to one of three oral double-blind treatment regimens for three weeks. Twenty patients received hydroxyzine (Vistaril®), 100 mg. q.i.d.; twenty others were given chlordiazepoxide, 25 mg. q.i.d.; and the remaining twenty received placebo capsules q.i.d. The capsule code was not made known until after completion of the study and analysis of the data. Response was measured with a modification of the Brief Psychiatric Rating Scale as originally outlined by Overall and Gorham.* Subjects were rated daily by trained staff members.

SYMPTOM RATING KEY

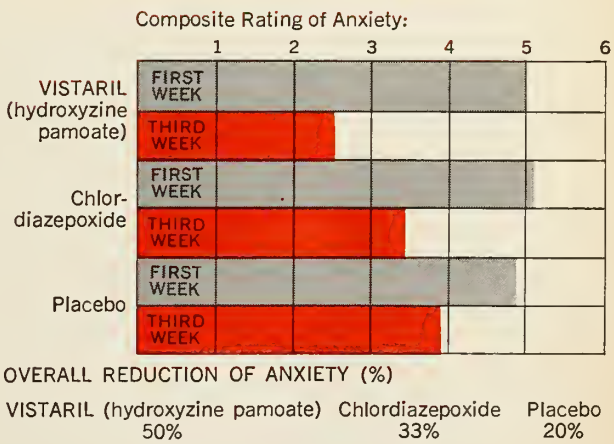
1=Not Present	4=Moderately Severe
2=Mild	5=Severe
3=Moderate	6=Extremely Severe

The figures which are given below represent the composite conclusions of the staff based on daily ratings during initial and final weeks of the study.

*Psychological Reports 10:799, 1962

the results[1] DURING FIRST WEEK DURING THIRD WEEK

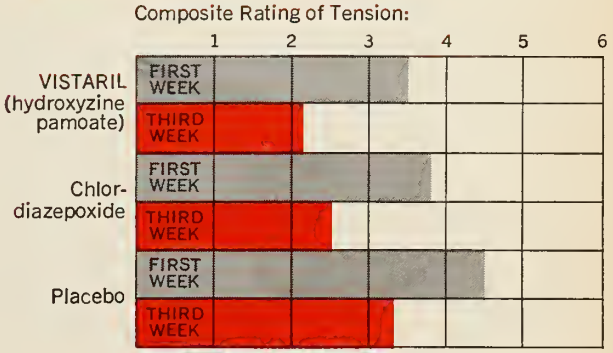
Anxiety reduced with Vistaril



OVERALL REDUCTION OF ANXIETY (%)

VISTARIL (hydroxyzine pamoate) 50% | Chlordiazepoxide 33% | Placebo 20%

Tension eased with Vistaril



OVERALL REDUCTION OF TENSION (%)

VISTARIL (hydroxyzine pamoate) 40% | Chlordiazepoxide 34% | Placebo 27%

*PLEASE SEE LAST PAGE FOR PRESCRIBING INFORMATION

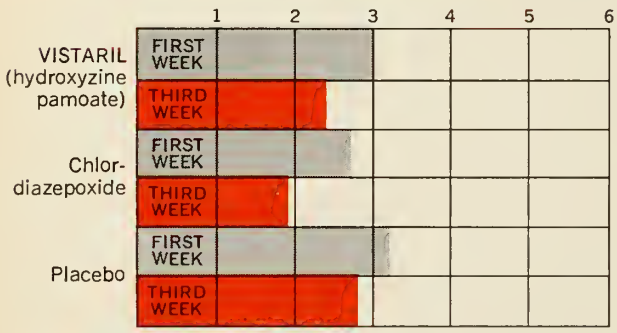
In Alcoholism...

"Both hydroxyzine and chlordiazepoxide were generally more effective than the placebo. In some aspects, hydroxyzine was superior to chlordiazepoxide, which is currently the most frequently used psychotropic drug in the management of alcoholism."[1]

DURING FIRST WEEK DURING THIRD WEEK

Depressive mood improved with chlordiazepoxide

Composite Rating of Depression:

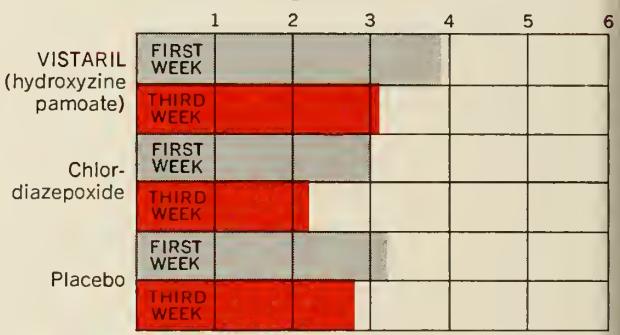


OVERALL IMPROVEMENT IN DEPRESSIVE MOOD (%)

VISTARIL (hydroxyzine pamoate)	Chlordiazepoxide	Placebo
20%	30%	13%

Emotional withdrawal counteracted with chlordiazepoxide

Composite Rating of Emotional Withdrawal:

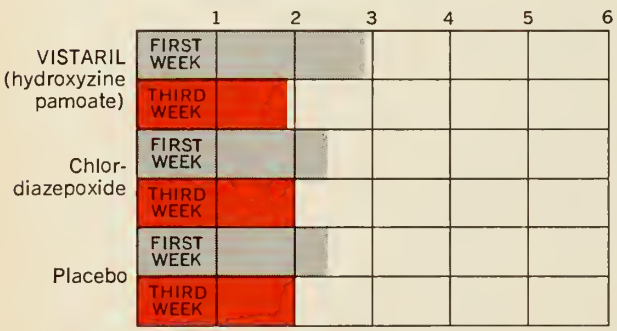


OVERALL IMPROVEMENT IN EMOTIONAL WITHDRAWAL (%)

VISTARIL (hydroxyzine pamoate)	Chlordiazepoxide	Placebo
21%	27%	13%

Guilt feelings allayed with Vistaril

Composite Rating of Guilt Feelings:

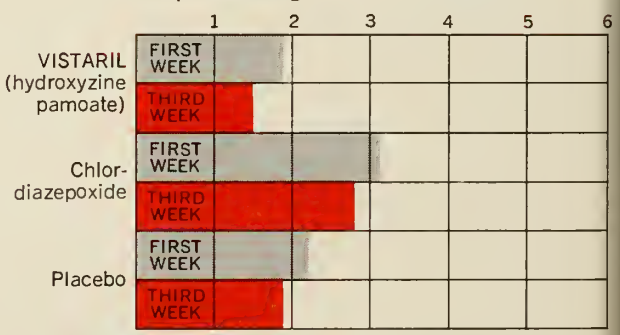


OVERALL DECREASE IN GUILT FEELINGS (%)

VISTARIL (hydroxyzine pamoate)	Chlordiazepoxide	Placebo
34%	17%	17%

Somatic concern alleviated to minor degree in each group

Composite Rating of Somatic Concern:



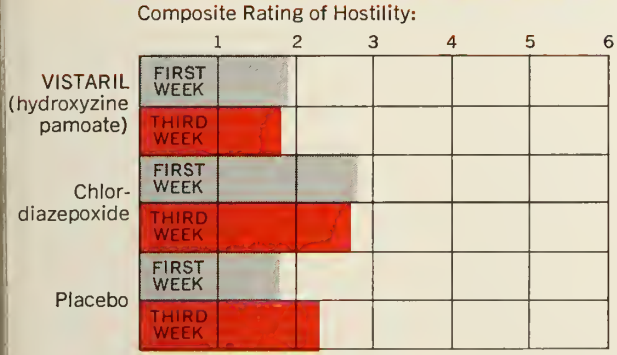
OVERALL ALLEVIATION OF SOMATIC CONCERN (%)

VISTARIL (hydroxyzine pamoate)	Chlordiazepoxide	Placebo
17%	13%	14%

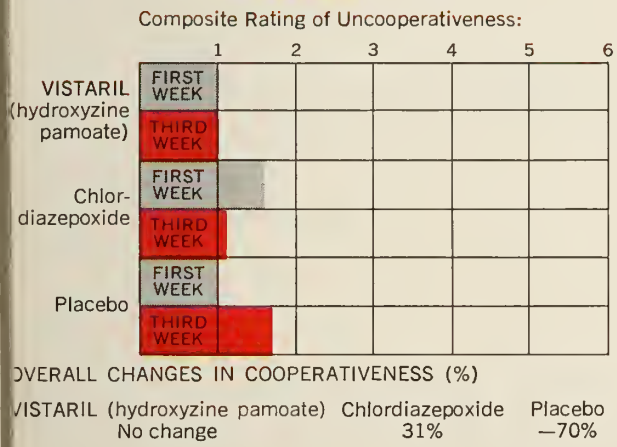
Less drowsiness with Vistaril

	Drowsiness	Dizziness	Mouth Dryness	Increased Motor Activity	Ataxia	Nausea	Comments
VISTARIL (hydroxyzine pamoate)	6 patients (mild)	3 patients (mild)	2 patients (moderate)	—	—	—	Side Effects Not Treated
Chlor-diazepoxide	10 patients (severe in 6)	4 patients (mild)	—	1 patient (moderately severe in first week but gradually subsided)	—	—	Side Effects Not Treated
Placebo	2 patients (mild)	2 patients (mild)	—	—	1 patient (mild)	2 patients (mild)	Side Effects Not Treated

Increase in hostility minimized with Vistaril and chlordiazepoxide



Cooperativeness not a significant problem



In Alcoholism...

Vistaril®

(HYDROXYZINE PAMOATE)

BRIEF SUMMARY

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate. Until adequate data are available to establish safety in early pregnancy, hydroxyzine is contraindicated during this period.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants such as narcotics and barbiturates. In conjunctive use, dosage for these drugs should be decreased, as much as 50%. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. Hydroxyzine parenteral solution for intramuscular use should be injected well within the body of a relatively large muscle. In adults, the preferred sites are the upper outer quadrant of the buttock (i.e., gluteus maximus), or the mid-lateral thigh. In children, preferably the mid-lateral muscle of the thigh. In infants and small children the upper outer quadrant of the gluteal region should only be used when necessary, as in burn patients, in order to minimize the possibility of damage to the sciatic nerve. The deltoid area should be used only if well developed, such as in certain adults and older children, and only with caution to avoid radial nerve injury. Injections should not be made in the lower and middle thirds of the upper arm. Aspiration should be done to help avoid intravascular injection. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or possibly periarterial extravasation. Therefore, particular caution (aspiration and site injection) should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose. In order to avoid possible adverse effects it is recommended that hydroxyzine parenteral solution be diluted to at least 50 cc. with sterile normal saline and administered over a period of four minutes or more, preferably into the tubing of a running intravenous infusion.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may occur with higher doses. Involuntary motor activity, including rare instances of tremor and convulsions, has been reported, usually with higher than recommended dosage.

When this product is given intravenously undiluted, minimal amounts of intravascular hemolysis occur at the site of injection. Giving the maximum recommended intravenous dose (100 mg.) to adults results in immediate transient hemolysis with the liberation of a total of 2-3 grams of hemoglobin, which, in some individuals, can cause small amounts of hemoglobinuria. This compares with the normal red cell destruction from which approximately 8 Gm. of hemoglobin are liberated every 24 hours. If the hydroxyzine is diluted with 50 cc. of normal saline and given during a period of four minutes or more, this phenomenon does not occur.

Supply: Vistaril (hydroxyzine pamoate) Capsules: Equivalent to 25 mg., 50 mg., 100 mg. hydroxyzine HCl. Vistaril (hydroxyzine pamoate) Oral Suspension: Equivalent to 25 mg. hydroxyzine HCl per 5 cc. teaspoonful. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10 cc. vial and 50 mg./cc.—2 cc. and 10 cc. vial; Isoject,® 25 and 50 mg. per cc., 1 cc. per unit.

More detailed professional information available on request.

Reference: 1. Knott, D.H. and Beard, J.D.: GP 36:118, September, 1967.

Pfizer LABORATORIES DIVISION
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Night Leg Cramps . . . Unwelcome Bedfellow

In Diabetes[1], Arthritis[2], and Peripheral Vascular Disorders[2]



now . . . specific therapy for night leg cramps

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Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

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Prescribing Information: Composition: Each white, beveled, compressed toblet cantoins: Quinine Sulfote 260 mg. ond Aminaphylline 195 mg. **Contraindication:** QUINAMM is cantraindicated in pregnancy because af its quinine cantent. **Precautions:** Aminaphylline may praduce intestinal cramps in same instances, and quinine may produce symptams of cinchanism, such as tinnitus, dizziness, and gastraintestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rash, ar visual disturbances accur. **Dosage:** One tablet upan retiring. Where necessary, dosage may be increased to one tablet fallawing the evening meal and ane tablet upon retiring. **Supplied:** Bottles af 100 and 500 tablets. **References:** 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angiology, 12:102, 1961. 3. Rowls, W., et al.: Med. Times, 87:818, 1959. 6/67 Q-706A

State Of Maine

Department of Health and Welfare

DEAN H. FISHER, M.D.
COMMISSIONER

Comprehensive Community Mental Health Centers

JOHN B. LEET*

"A new institution is born that will have as great an impact in the coming years as . . . public assistance three decades ago." Bertam J. Black in Social Work (January, 1967). With these words one expert envisions the potential force of the comprehensive community mental health center.

The centers, now in various phases of planning, construction, and staffing in every state, embody the "bold new approach" to mental health urged by the late President Kennedy to Congress in 1963. The first legislation gave money for construction, the second in 1965, for staffing. No two centers are alike despite common ideals because each reflects the special needs of its community. However, to draw on Federal funds all of them must offer five basic elements of care: In-patient services; outpatient care; 24-hour emergency service; partial hospitalization; consultation and education. Later, for true breadth, the center may add diagnostic services, rehabilitation, precare and aftercare, training, and research and evaluation. Finally the center's plan of operation must be compatible with a state plan approved by the National Institute of Mental Health. Already 185 community mental health centers in 43 states and territories have met these requirements. The National Institute of Mental Health oversees the program and expects that 286 centers will be operating by July (1968) serving a population of 47 million. Envisioned for 1970 are 580 centers with some 2,000 foreseen by 1975. The care concept of the new approach, as spelled out in the Comprehensive Community Mental Health Act, is Continuity of Care in which a patient is able to transfer easily from one type of care to another as his needs change with no lag in treatment. It marks a shift from institutional care to community care. "Center" refers not to facilities but to integrated services, services that need not be under one roof but under one umbrella or unified direction. The continuity of care and the transfer features promoted within the concept of the new approach are long standing therapeutic ideals that have never been put into practice. If comprehensive mental health centers achieve them even partially, it will materially change the face of community health and welfare services.

The reader must keep in mind that in order to provide the essential elements of service in each of these areas there must be close coordination of existing mental health facilities' services. To do this letters of agreement have, in many areas, been drawn up between the clinics, general hospitals, state hospitals, and other agencies in the area plan describing the service that will be supplied to offer continuity of service.

Mental Health Center Area I – Aroostook Mental Health Services, Inc. – The Aroostook Mental Health Clinic, located at the Community General Hospital in Fort Fairfield, has been in existence for a little over a year for the express purpose of helping people, both children and adults, who have emotional problems with which they have difficulty coping in this complex world. The clinic has come a long way since the first psychiatrist was hired in February, 1966 as part-time director.

The psychiatrist worked on a part-time basis from February through April in preparing for the opening of the Aroostook Mental Health Clinic which opened formally in April, 1966. Although the staff is now handling over 200 cases a year, the clinic continues to struggle to keep up with the needs of the constantly growing population. Treatment of emotional difficulties of children and their families is by far the most important work of the clinic. The staff spends the majority of its time in direct individual, conjoint, or family therapy. In view of the small staff and community needs, however, emphasis is placed on consultative services to other agencies and referral sources. The services to other agencies and referral sources which are now offered by the Aroostook Mental Health Clinic fall roughly into five categories: 1. Diagnosis of individual and family difficulties in living; 2. Individual, conjoint, and group treatment of adults, parents, and children; 3. Consultation with other community agencies such as the division of Family Services and Child Welfare, public health nursing, district courts, and with the guidance and teaching staffs of the Aroostook County school systems; 4. Research into the

*Deputy Director, Bureau of Mental Health, Department of Mental Health and Corrections.



Maine Mental Health
Center Areas

causes of family problems; 5. Reporting to professional societies, local, state, and federal groups, and to interested individuals of the services and activities of the clinic. The services of the Aroostook Mental Health Clinic are available to all residents of Aroostook County and the general Mental Health Area I as set up by the State Bureau of Mental Health. Since the opening of the clinic people have come for treatment mostly on their own initiative or at the suggestion of friends. Others are sent by the schools, the courts, and the welfare agencies. A great number of patients were referred by their physicians.

At the time of the official opening of the Aroostook Mental Health Clinic in April of 1966, the staff included a part-time psychiatrist who served as clinic director, a part-time psychiatric social worker, a part-time psychiatric social work assistant, a part-time psychology assistant, and a full-time medical secretary. The present staff includes a full-time psychiatric social worker, three part-time psychologists, two part-time psychiatric social work assistants and a full-time medical secretary. In addition, a psychologist has been hired as director of the clinic. It is anticipated that psychiatric consulation will again be available to this clinic in the near future.

On June 30, 1967, the end of the fiscal year, the clinic had offered services to 253 patients from the time of its official opening. In addition to the central clinic facilities, a satellite mental health center was opened in Houlton at the Madigan General Hospital under the direction of Max Hammer, Ph.D. and a second satellite center is located in Fort Kent at the Peoples Benevolent Hospital.

Houlton Mental Health Center, Madigan Hospital - Officials of the Houlton Mental Health Center have been extremely pleased with the receptivity and response of the Houlton area to mental health services. The clinic operates two days a week and since November 1, 1966, when the operation was initiated, the clinic had handled 59 different clients for a total of 96 patient contacts, totaling approximately 223 hours of patient contact; 44% of these patients have been adults and 56% children and adolescents. In addition, there has been a total of 35 consultations with a variety of community agencies totaling approximately 30 hours. As a result of the excellent community response to the clinic, the waiting time for services is now up to some six weeks. It is expected that the staff of this clinic will be increased to handle these additional services. Already a relationship has been established with the University of Maine Graduate School of Psychology to offer an internship in clinical psychology to one of the graduate students. The graduate student will be putting in 20 hours per week with the clinic. In this way officials of the clinic are hopeful of eventually enticing capable professionals in clinical psychology.

The clinic is also enlarging its quarters and adding another office to make room for the graduate students. In addition to the psychologist's present duties, he is also serving as a consultant to a variety of social agencies in the community as well as the psychological consultant for the Head Start program in Presque Isle.

Mental Health Center Area II – To date Area II's efforts to implement the Maine Mental Health Plan have consisted primarily of laying the groundwork to develop a comprehensive mental health center. There has been increased communication among the mental health units in the area. For the past year and a half the staffs of the Eastern Maine Guidance Center, the Family and Child Services, and the Psychology Department of the Bangor State Hospital have met for case conferences. Also, the Boards of Directors of both the Eastern Maine Guidance Center and the Family and Child Services are actively exploring further ways in which the two agencies may collaborate. These two agencies have been sharing the services of a chief psychiatric social worker. The two agencies will undoubtedly work more closely together in the future and will include other social welfare agencies.

The Area II Mental Health Advisory Board has been organized. The development with the most future potential is Dr. Irwin Pasternak's joining the staff of the Eastern Maine Guidance Center, thereby giving that agency much more extensive psychiatric coverage than it has ever previously enjoyed. In addition to his activities at the Center, Doctor Pasternak has been asked to organize an inpatient psychiatric unit at the Eastern Maine General Hospital. When he succeeds in this endeavor, all the basic components of a comprehensive mental health center will exist in Area II. This important step, coupled with the increased communications among the other mental health agencies, should greatly facilitate the formation of a comprehensive mental health center.

The Washington County Mental Health Association –

This Association was organized in 1961 and has sponsored a one-day per week mental health clinic in the Downeast Community Hospital in Machias since July 1, 1966. The staff, during the first year, consisted of one child psychiatrist, Doctor Enid Melville, and a part-time clerical worker. Since Doctor Melville was one of only two child psychiatrists in the entire state, the Association felt extremely fortunate in having her services for a year. The increase in the number of appointments made at the clinic since it opened showed that people in the County were becoming more and more aware of mental health problems and were interested in getting help for themselves. This was reflected by the fact that the second largest number of referrals were self-referrals or by family or friends. Social agencies sent the largest number of people to the clinic.

Doctor Melville had worked at Bellevue Hospital in New York City before coming to Washington County and was surprised to find that people here had the same general emotional problems that she met in the urban area. She felt that the Machias clinic would eventually have to be expanded to a larger staff with full-time capabilities. The Washington County Association hopes to do this as people ask for more consultation time and as more funds become available. In the summer of 1967 the clinic time was increased to one and a half days per week and staffed until October by Doctor Wally Reichenberg Hackett, clinical psychologist. Doctor Reichenberg Hackett has been teaching in the Psychology Department at Iowa Wesleyan College and before that retired from the Department of Psychology at the University of North Carolina. She had done clinical work at the Psychopathological Clinic of the University of Hawaii and was a consultant at the Riverdale Country School, New York City and at the North Carolina Cerebral Palsy Hospital in Durham.

Future plans of this Area envision a Mobile Mental Health Clinic with offices in Dover-Foxcroft, Millinocket and Lincoln, hopefully hospital-based.

Mental Health Area III – Mental Health Area III has established an Advisory Board with Mr. Carmen M. Celenza, Executive Director of the Kennebec Mental Health Clinic in Waterville, Maine, as chairman, Doctor Charles Rothstein, Vice-Chairman, Miss Lorna Dill, Secretary, and Reverend Aubrey Burbank, Treasurer. Other Board members include Mr. Burton Payson, Mr. Samuel Hamilton, Reverend H. Everett Wiswell, Mr. Clarence Allen, and Mr. Verne Smith. The Board met diligently during the past year and announced that their by-laws had been completed and approved by the Assistant Attorney General of the Department of Mental Health and Corrections.

Professional personnel needs and salary ranges for these professionals were surveyed. Delegates from the respective mental health services of Area III were contacted to assess their interest in the Mental Health Center.

Insofar as clinical activities are concerned, the Kennebec Mental Health Clinic, located at the Thayer Hospital, Waterville, Maine, is presently becoming the hub of mental health activities for Mental Health Area III. In addition to providing the usual diagnostic and treatment services, the clinic is frequently called upon for educational and consultant services for the community and various federal programs, including Vocational Rehabilitation. The staff continued to be called upon for various speaking engagements.

A television program entitled "A Search for Understanding" was shown on Channel 10 in September. This was to demonstrate to the public the internal functionings of a community mental health clinic. At a recent meeting of the Board of Directors of the Kennebec Mental Health Clinic it was agreed to include a children's treatment program as an integral part of the ongoing program.

Somerset County continues to purchase mental health services from the Kennebec Mental Health Clinic as part of an agreement for the provision of services in the total mental health center area.

Mid Coast Mental Health Clinic – The Mid Coast Mental Health Clinic, located in the Knox General Hospital in Rockland, is a component of the Mental Health Center Area III complex. It continues to offer mental health services for the area on a limited basis and is presently seeking funds to expand its program.

Mental Health Center Area IV – As the first step in carrying out the recommendations of the Regional Report for the establishment of a Comprehensive Community Mental Health Center, the staff of the Androscoggin Mental Health Clinic and the Child and Family Services were integrated on October 3, 1966 and have become known as Child and Family Mental Health Services. Professional services were increased not only in quality but quantity as well. Doctor Najib M. Pandya joined the staff as Medical Director. On November 7, 1966 the Area IV Mental Health Advisory Board was formed with representatives from the Boards of the satellite clinics in Oxford and Franklin Counties. John B. Beliveau, a Lewiston attorney, was elected Chairman and supervised the drafting of the by-laws. The Area Advisory Board has met regularly since November and has supervised the development of an Areawide application for federal staffing funds. The application for $110,000 was approved effective November 1, 1967. The Area Advisory Board is assisting the Oxford and Franklin County clinics in the development of professional services and coordinating activities with the Center.

Construction of a new Mental Health Center commenced on December 5, 1966, on Campus Avenue near St. Mary's Hospital in Lewiston and was completed in the fall of 1967. The financial resources for the operation of the Center are the Auburn-Lewiston United Fund, the school departments of Lewiston and Auburn,

the Androscoggin County Commission, the State Bureau of Mental Health and the National Institute of Mental Health. The local share of construction funds was pledged by the pastors of the Catholic parishes of Auburn and Lewiston and the National Institute of Mental Health is providing the 58% federal matching share.

A great deal of progress has been made in the development of mental health services in Oxford County. The Board of Directors of the Oxford Mental Health Association have been reorganized and a community fund drive in Norway, Paris, and Rumford raised over $2,000 in small donations. Limited and intermittent services have been provided over a period of time by three different part-time psychiatric social workers. Financial support has been requested from 35 towns in Oxford County and 29 have responded with appropriations. Contractual arrangements have been made with the Mental Health Center for part-time services until such time as full-time staff can be hired. Also arrangements have been made with North Country Clinic in Berlin, New Hampshire to take referrals. Mr. Stanley Sowiki has been hired to direct the clinics in Norway and Rumford.

Mental Health Center Area V – During the course of the year Area V has been in the process of organizing a Mental Health Center Area Board. The Board will develop and promote educational programs for the citizens in the area relative to mental health needs and resources through the use of publicity, workshops and other appropriate media. It will act as a liaison between mental health services and assist in delivering mental health services in the most economical and effective manner throughout the area. The Board will also act as an instrument for communication between all governmental and voluntary agencies and services in the area. It consists of representatives of each regional committee organized under Maine's Mental Health Plan according to the following formula: A basic allotment of three representatives each from regions 12, 13, 14, and 15, plus one additional representative from areas having between 15,000 and 25,000 population. The population representation shall be reviewed annually. At present a new mental health center is being constructed at the Maine Medical Center.

Bath-Brunswick Mental Health Association, Inc., and Guidance Center – Officials of the Clinic continue to participate with representatives from other regions within Area V in the planning of comprehensive mental health services to the Area. The town of Freeport has voted funds to obtain some services through the Bath-Brunswick Mental Health Association. The Board of Directors of St. Andrew's Hospital in Boothbay Harbor is currently developing a program for mental health services in that area.

The Bath-Brunswick Mental Health Association has received some funds under the Elementary and Secondary Education Act of 1965 and through Operation Lighthouse, which serves the mid-coast communities from Brunswick to Warren. During this past year the Clinic has had one full-time caseworker and a part-time consulting psychologist provided by this program. Next year it is anticipated that funds for a full-time psychologist will be available. During the coming year more emphasis may be placed on inservice training of teachers, as well as more thorough case conferences with school personnel. The staff of the clinic itself was increased by the addition of Mrs. Anne Ladley as a full-time case-worker.

Clinic offices are located in Bath-Brunswick at the general hospitals.

Southern Part of Area V – Sweetser Children's Home, under Director Linwood Brown, continues to expand its services and is presently contemplating new construction. York County communities bordering New Hampshire purchase services from the Portsmouth Mental Health Clinic with State Mental Health Community Grant-in-Aid funds.

Progress – The progress in implementing Maine's Mental Health Plan has been most encouraging especially when one realizes the many obstacles and deficiencies inherent in such a plan. With the cooperation of the Governor, Legislators, officials of the mental health institutions and community leaders, Maine has been successful in providing care and treatment for persons with mental health problems.

The funds appropriated by the Legislature to the Bureau of Mental Health of the Department of Mental Health and Corrections have assisted strategic communities in developing mental health services. *Maine's Mental Health Plan is not gathering dust upon the shelf, it is being implemented.*

Maine Heart Association Notes
116 State Street, Augusta, Maine

Relapses Of Thromboembolic Disease After Discontinued Anticoagulant Therapy

There has been disagreement about ways of reducing any tendency for thromboembolism to recur after stopping anticoagulant therapy. Gradual reduction in dosage over several weeks is common practice.

. . . varying results suggested the need for a controlled prospective study of the comparative effect of stopping anticoagulant therapy gradually or abruptly.

. . . (in this study) there is evidence to suggest that the vascular disease was somewhat less advanced in patients in the "gradual" group, and the data have been analyzed in a way more favorable to it. Nevertheless, the extent to which the recurrence rate of thromboembolic disease was the lesser in the "gradual" group was very slight, and the differences between the two groups were statistically without significance. . . . The practical disadvantages of reducing anticoagulant therapy gradually do not seem to be counterbalanced by any demonstrable advantages in the form of significant reduction in subsequent incidence of thromboembolic recurrences. . . .

. . . On 89 occasions anticoagulant therapy . . . was stopped electively. Treatment was reduced gradually over a six-week period on 42 occasions and stopped abruptly on 47. . . . The relapse rate was 21 per cent after stopping treatment abruptly and 17 per cent after doing so gradually. . . . gradual reduction in anticoagulant dosage over a period of weeks is without appreciable benefit as far as preventing recurrence of thromboembolic disease is concerned.

From Jacob B. Dana, M.D., Maine Heart Association.

Reference — Michaels L. and Beamish R., The American Journal of Cardiology, Vol. 20 pages 670-673, 1967.



when he just can't sleep

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One-Half Sodium Amobarbital and
One-Half Sodium Secobarbital
supplied in ¾, 1½, and 3-grain Pulvules®



Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.



Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

Additional information available to physicians upon request.
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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.
Brunswick, Maine

The "Image" of Cancer*

STANLEY WARREN**

What's the attitude of the public towards cigarette smoking? Have the shocking statistics on the rapid rise in the lung cancer death rate since 1920 had any appreciable effect on cigarette smokers? Do smokers and non-smokers differ in their perceptions of the kinds of people who are likely to be hit by cancer?

According to a nationwide survey conducted by the American Cancer Society approximately half of those queried reported that they smoked cigarettes at the time of questioning. The figures further revealed that cigarette smoking was more common among men than among women and more common with younger people than among oldsters. Smoking, the findings revealed, is not related to a person's income or education. Furthermore, half the population of the United States continues to smoke cigarettes despite the warning notices on cigarette packs and medical reports of the Cancer Society and Federal government researchers.

There is conclusive evidence that the well-aimed barrage of publicity over the rise in lung cancer cases over the past two decades has caused sizeable defections in the ranks of cigarette smokers. Federal researchers have found that 19,000,000 cigarette smokers have quit. Further tribute to the effectiveness of the campaign is readily observable in the sharp drop in cigarette smoking among doctors. Only half as many MD's smoke today (30%) as compared with ten years ago (60%).

The other side of the coin does not sparkle, however, for places in the ranks of smokers who've abandoned the habit are being filled by almost the same number of those becoming cigarette-addicted for the first time. It may be noted here that the recovery rate from cancerous lungs is a frightening 5%, lowest of all forms of the disease. Yet, it is clearly established that most cancer of the lungs can be avoided simply by foregoing cigarette smoking.

In the light of this knowledge, let us look at some of the statistical features brought to light by the ACS survey. Of those who smoke cigarettes, it was found that some 39% smoke less than a pack a day; 37% smoke one pack per day; while 23% smoke more than a single pack in a 24-hour period. And heavy smoking occurs more frequently among men than women and among higher income groups than lower.

Filter cigarettes, possibly due to the wide publicity given to the dangers of smoking by various health organizations, are smoked in much greater quantities today than non-filters. The percentage figure runs 70% filter as against 28% non-filter.

The survey further revealed the point that whether or not a person smokes bears no relation to his likelihood of going to his doctor for cancer checkups. Smoking, it was learned, is about as common among the goers as the non-goers. And, in similar fashion, the amount a person smokes is not related to his attitude and willingness to go for checkups. Heavy smokers are just as likely to be found in each segment, goer or non-goer.

However, those who go regularly for cancer tests are much more likely to be those who smoke filter type cigarettes than non-goers who tend to stick to non-filtered smoking.

Obviously these findings suggest that many who take the precaution of going for medical checkups do not extend this caution to giving up smoking. Their only concession to the mounting mass of evidence which show the dangers of smoking is to switch to a filter. A man may rather fight than switch brands, but he'll switch to filtered cigarettes in a hurry if he feels it necessary.

Here is a breakdown on the background characteristics of cigarette smokers. Asked "how much do you smoke a day," here's how the respondents replied:

	Less Than 1 Pack A Day	*1 Pack A Day*	*More Than 1 Pack A Day*	*NA*	*Total*
Total Smokers	39%	37%	23%	1%	100%
Sex					
Men	31	39	29	1	100
Women	49	34	16	1	100
Age					
20 - 29 years	44	39	17	—	100
30 - 49 years	35	36	28	1	100
50 years and over	40	38	20	2	100
Education					
Grade school	37	38	23	2	100
High school	38	38	24	*	100
College	41	35	22	2	100
Income					
Under $6,000	43	36	20	1	100
$6,000 - $9,999	34	38	23	*	100
$10,000 and over	34	35	29	2	100

*Less than 0.5 per cent.

Do smokers and non-smokers differ in their estimates of the likelihood of smokers getting cancer? The answer to this, oddly enough, turned out to be negative. Apparently smokers and those who do not smoke are both acutely aware that smokers are in a group which has an above-average chance of getting cancer. The percentage here is roughly 68% for the smokers against 76% for the non-smokers.

Yet heavy smokers appear to be even more aware than light smokers that cigarette smoking can lead to cancer. Of the more-than-a-pack-a-day smokers surveyed, 25% cited smokers as a group more likely to be stricken by cancer. About 17% of the light smokers (less than a pack a day) felt that smoking was a serious cancer hazard.

These smokers — including all types, light, medium or heavy — continue to smoke despite the fact that they realize smokers are playing games with their health. Such is the power of an addictive habit.

*Part five of a six-part series from American Cancer Society News Service Release.
**News Editor, American Cancer Society, Inc.

The Journal of the Maine Medical Association

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Across The Desk

Congress Adjourns

FIRST SESSION ADJOURNS . . . In an expected flurry of final activity, the First Session of the 90th Congress adjourned Dec. 15 . . . By a vote of 62-14, the Senate adopted the conference committee report on H. R. 12080, the Social Security Amendments of 1967 thus clearing it for the President. Voting against adoption were Democratic Senators: Harris, Oklahoma; Hart, Michigan; Kennedy, Massachusetts; Kennedy, New York; Metcalf, Montana; Mondale, Minnesota; Nelson, Wisconsin; Proxmire, Wisconsin; Tydings, Maryland; Williams, New Jersey; and Yarborough, Texas. Republicans casting a nay vote were Senators: Brooke, Massachusetts; Case, New Jersey; and Javits, New York . . . Senate Majority Leader Mansfield (D) Montana and Senate Whip Long (D) Louisiana were not present for the final vote but were paired for the vote with Long for adoption and Mansfield against.

During the first session, over 1,100 bills of medical interest were introduced compared with only 850 introduced during the first session of the 89th Congress. In addition to the social security amendments which cleared the Congress on the final day of the first session, Congress passed several bills of interest to Medicine. Among other bills enacted into law were: Mental Health Amendments (P. L. 90-31); "Doctor Draft" Extension (P. L. 90-40); Older Americans Act (P. L. 90-42); Vocational Rehabilitation Act Amendments (P. L. 90-99); Air Quality Act (P. L. 90-148); Mental Retardation Act Amendments (P. L. 90-170); Partnership for Health Amendments (P. L. 90-174); the Flammable Fabrics Act Amendments (P. L. 90-189); and the Military Pay Act Amendments (P. L. 90-207). . . . On thirteen occasions the AMA submitted its views to Congress on pending legislation. On four other occasions, the Association provided informational statements.

The Second Session . . . The Second Session of the 90th Congress will convene on Monday, January 15, 1968. Being a presidential election year, it will be a substantially shorter session than the first, with major emphasis focused on such political and national interest areas as an income tax increase, Vietnam, and domestic poverty programs. . . . . The lawmakers are not expected to inaugurate many new programs or look with favor upon the extension of expensive existing programs with which the public has expressed dissatisfaction . . . However, wholesale cutbacks of welfare programs are not likely.

Held over to the Second Session are several important bills of medical interest. These include: S. 260, the Medical Restraint of Trade Act; S. 2076, the Hospital Modernization Act; S. 2251, the Hill-Burton Extension; H. R. 13168, the Laboratory Animal Care Bill; H. R. 10790, the Radiation Control for Health and Safety Act; H. R. 10726, the Medical Device Safety Act; H. R. 13096, Extension of Diploma Nurse Training Program; and H. R. 8765, Tax Treatment of Income from Publications of Exempt Organizations. – *Legislative Round-up,* Dec. 22, 1967, Vol. VIII-LR 45.

Cost Of Health

A total of $47.3 billion was expended in the United States for health and medical care during fiscal 1967, the Social Security Administration says. In research and statistics Note No. 21, SSA says the figure represents an increase of $4.5 billion over the amount spent in fiscal year 1966, the largest annual increase since the agency began keeping track in 1929. Part of the reason behind the record increase is the rapid recent rise in medical care prices. The fiscal 1967 expenditure for health care is 6.2 percent of the Gross National Product. Public expenditures for health care during fiscal 1967 were $16.2 billion. Private expenditures were $31.1 billion,

a slight decline from the previous fiscal year due to Medicare and Medicaid. – *Washington Report on the Medical Sciences,* Dec. 11, 1967

World Medical Association Open To Individual Membership

Individual membership in the World Medical Association is now open to all members of the American Medical Association. Dues are ten dollars per year. This includes a subscription to *World Medical Journal* and the privilege of participation in the World Medical Assembly each year.

The 21st World Medical Assembly was held in Madrid, Spain, Sept. 10 to 17, 1967. The 1968 assembly will be held in Australia.

The World Medical Association is a society for the free, professional medical associations of the free nations. Sixty national medical associations are members, including the AMA.

The 20th World Medical Assembly last winter in Manila created for the first time an individual associate membership within the WMA. Members of the national medical associations may now join WMA as individuals.

Gerald D. Dorman, MD, of New York City, member of the AMA Board of Trustees, is chairman of the Council, the governing body of the WMA. The WMA Headquarters Secretariat is located at 10 Columbus Circle, New York City. Secretary General is Alberto Z. Romuladez, MD.

Application for individual membership may be made in the form of a letter to WMA at the New York City office. Applications should be accompanied by a check for ten dollars, with a statement that the applicant is a member in good standing of AMA. The letter should specify whether the applicant wishes to receive the *World Medical Journal* in English, Spanish, or French language edition. Check should be made payable to The World Medical Association, Incorporated. WMA is a tax-exempt organization. Five-year memberships are available for fifty dollars. Information regarding the 21st World Medical Assembly will be mailed promptly to all applicants for individual memberships.

"The World Medical Association," said Dr. Dorman, "is uniquely qualified to act as a force for peace and understanding in the world today. WMA is a very real and vital part of the world health picture, continually seeking to solve world medical problems through the community spirit and action of its professional membership."

Dr. Dorman made it clear that the WMA has no connection with any government, that it is committed to the philosophy that medical and scientific knowledge should be universally available and free of all political control.

"The WMA is present at conference tables around the world where decisions are made affecting the practice of medicine, and where the practicing physician's free-enterprise viewpoint would not ordinarily be considered," Dr. Dorman said.

"Thanks to WMA, the individual doctor has an effective, recognized international voice in health and professional matters now being considered by such government organizations as WHO, UNESCO, International Labor Organization, International Social Security Association, and other governmental and nongovernmental bodies."

WMA was organized in 1947. In 1965 it was incorporated as a non-profit educational and scientific organization under the laws of New York State. Funds donated to the organization are tax-deductible. – *JAMA,* June 12, 1967, Vol. 200, No. 11.

THE WORLD MEDICAL ASSOCIATION, INC.
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Revised Professional Liability Rates for Maine — 1968

Classifications: Physicians', Surgeons' and Dentists' Professional

Classifications

Class 1

Physicians – no surgery ..... per person (Code No. 8361)

New Rate†	*Old Rate*
$36.00	$44.00

This classification applies to general practitioners and specialists hereafter indicated, who do not perform obstetrical procedures or surgery (other than incision of boils and superficial abscesses, or suturing of skin and superficial fascia), and who do not ordinarily assist in surgical procedures.

Specialists

Allergists
Cardiologists (not including catheterization)
Dermatologists
Gastroenterologists
Industrial Medicine Physicians
Internists
Neurologists
*Pathologists
Pediatricians
Preventive Medicine Physicians
Psychiatrists
Public Health Physicians
Rehabilitationists – Physiatrists
*Roentgenologists – Radiologists

*Additional factors influence rate

Class 2

Physicians – minor surgery or assisting in major surgery on own patients .... per person (Code No. 8371)

New Rate	*Old Rate*
$63.00	$55.00

This classification applies to general practitioners and specialists hereafter indicated, who perform minor surgery (including obstetrical procedures not constituting major surgery) or assist in major surgery on their own patients. Tonsillectomies, adenoidectomies, and Cesarean sections shall be considered major surgery.

Specialists

- Allergists
- Cardiologists (not including catheterization)
- Dermatologists
- Gastroenterologists
- Industrial Medicine Physicians
- Internists
- Neurologists
- *Pathologists
- Pediatricians
- Preventive Medicine Physicians
- Psychiatrists
- Public Health Physicians
- Rehabilitationists – Physiatrists
- *Roentgenologists – Radiologists

*Additional factors influence rate

Class 3

Surgeons ..... per person (Code No. 8381)

New Rate	*Old Rate*
$108.00	$106.00

This classification applies to general practitioners who perform major surgery or assist in major surgery on other than their own patients and specialists hereafter indicated.

Specialists

- Cardiologists (including catheterization, but not including cardiac surgery)
- Ophthalmologists
- Proctologists

This classification does not apply to the operation of regular bed and board facilities. Such risks shall be classified and rated in accordance with the Hospital Professional Liability manual. It does not apply also to surgeons in the active military service of the United States or to those employed full time by the Federal Government.

Class 4

Surgeons – specialists ..... per person (Code No. 8382)

New Rate	*Old Rate*
$144.00	$106.00

This classification applies to the specialists hereafter indicated. Other specialists shall be classified elsewhere.

Specialists

- Cardiac Surgeons
- Otolaryngologists – No Plastic Surgery
- Surgeons – General (Specialists in general surgery)
- Thoracic Surgeons
- Urologists
- Vascular Surgeons

Class 5

Surgeons – specialists ..... per person (Code No. 8392)

New Rate	*Old Rate*
$180.00	$158.00

This classification applies to the specialists hereafter indicated. Other specialists shall be classified in accordance with the foregoing classifications.

Specialists

- Anesthesiologists
- Neurosurgeons
- Obstetricians – Gynecologists
- Orthopedists
- Otolaryngologists – Plastic Surgery
- Plastic Surgeons

†Basic rate with 5,000/15,000 limit

Income

WASHINGTON – Personal income in November recorded its sharpest increase in more than two years, the Commerce Department announced Dec. 19th. The November increase was about $5.8 billion to a record seasonally adjusted annual rate of $641.7 billion from October's $635.9 billion figure. It was the sharpest advance since September, 1965 when personal income jumped $14.9 billion to a $555.2 billion adjusted rate following increases in social security benefits. The category of wages and salaries rose in November by about $5.6 and about $2 billion of this increase resulted from the ending of strikes in the automobile and other industries, the Department added. – *The Blue Cross Digest,* Dec. 20, 1967

California Medicaid Investigated

SACRAMENTO, California – A special session of the California legislature on the state's Medicaid program ended after the Senate voted for an assembly-passed resolution calling for an outside audit of Medicaid funds and a moratorium on the Administration's cutbacks in the program at least until January 31. According to the *San Francisco Chronicle,* Gov. Ronald Reagan, who had ordered the cutbacks, "accepted this procedure reluctantly" in return for passage in the assembly of two of his bills including one that would shorten the billing periods under Medicaid. The legislature will be back in regular session on January 8. – *The Blue Cross Digest,* Dec. 12, 1967

Medicare Costs More

WASHINGTON – John W. Gardner, Secretary of Health, Education and Welfare, announced Saturday that the part B Medicare premium will be increased from $3 to $4 effective April 1. – *The Blue Cross Digest,* Dec. 12, 1967

Hospital Costs

CHICAGO – Total hospital cost per patient day reached $55.82 in September, a 14.3 percent increase ($6.99) over September, 1966, according to the December 16 Hospitals, *Journal of the American Hospital Association.* "Closer inspection of this increase shows that payroll has been increasing faster than other components of the figure," the Journal says. Edwin L. Crosby, Director of the AHA, said "There are strong indications that the increase in hospital costs for this next year will be close to 15 percent because of the continuing wave of salary increments for hospital personnel and the general increases in the cost of living." – *The Blue Cross Digest,* Dec. 20, 1967

The Answer Remains The Same (Money And Men)

WASHINGTON – Claiming that "Our national health system is badly out of kilter," Rep. Benjamin S. Rosenthal, D-N. Y., in a special news conference, announced a five-point program to improve the nation's system of health care services. He proposed a new program to include construction of 50 new medical schools in the next 10 years and a program of free medical

Continued on Page XVI

Necrologies

Cecil J. Metcalf, M.D.
1907-1967

Cecil J. Metcalf, M.D., 60, of Cambridge, Massachusetts died on August 7, 1967. He was born in Dodgeville, Wisconsin on June 7, 1907, son of Alexander and Cora Perkins Metcalf.

Dr. Metcalf graduated from the University of Wisconsin in 1929 and received his medical degree from the Rush Medical College in 1934. He interned at the Rhode Island Hospital from 1933 to 1935 and served a residency there from 1940 to 1942. Dr. Metcalf had practiced medicine in Rhode Island and Utah, located in Bangor in 1964 and then moved to Massachusetts in 1966.

Dr. Metcalf was a member of the Penobscot County Medical Association, the Maine Medical Association, the American Medical Association and the American Board of Anesthesiology.

Surviving is his widow, Helen Farrell Metcalf of Massachusetts.

Frederick L. Chenery, Jr., M.D.
1889-1967

Frederick L. Chenery, Jr., M.D., 78, of Monmouth, Maine died on September 25, 1967. He was born in Wayne, Maine on February 21, 1889, son of Dr. Frederick and Lizzie Lawrence Chenery.

Dr. Chenery attended Wayne schools, graduated from Kents Hill Academy in 1907, the University of Maine in 1911 and received his medical degree from Bowdoin Medical School in 1918. He interned at the Eye and Ear Infirmary in Portland and the Central Maine General Hospital in Lewiston. Dr. Chenery started his practice in Monmouth in 1919 and served there and in surrounding communities for forty-two years.

He was a member of the Androscoggin County Medical Association, the Maine Medical Association, the American Medical Association, and was a member of the courtesy staff at the Central Maine General Hospital.

Surviving are a son, Frederick L. Chenery, III of Dubuque, Iowa; an aunt, Miss Jennie Chenery of Cincinnati, Ohio; a cousin, Miss Emily Fessenden of Cincinnati, Ohio and two grandchildren.

J. Foster Wellington, M.D.
1902-1967

J. Foster Wellington, M.D., 65, of Portland, Maine died on October 9, 1967. He was born in Calais, Maine on January 2, 1902, son of Harry and Mary Foster Wellington.

Dr. Wellington attended Calais schools, graduated from Boston University in 1928 and received his medical degree from Tufts University School of Medicine in 1932. He served a residency at the Maine Medical Center from 1932 to 1933. Dr. Wellington practiced for two years in Wilton and then returned to the New York Post Graduate School of Columbia University to do graduate work in urology. For many years he practiced urology in Portland until his retirement in 1963.

He was a member of the Cumberland County Medical Association, the Maine Medical Association, the American Medical Association and the Portland Medical Society. He was also a fellow of the American College of Surgeons, the American Urological Association, the New England Urological Association and was an honorary staff member of the Maine Medical Center, the Mercy Hospital and the City Hospital.

Surviving are his widow, Bertha Maxwell Wellington; a daughter, Mrs. William K. Tyler of Cape Elizabeth and five grandchildren.

George L. Pratt, M.D.
1877-1967

George L. Pratt, M.D., 90, of Fairfield, Maine, a Past President of the Maine Medical Association, died on November 4, 1967. He was born in Strong, Maine on June 17, 1877, son of the Reverend Jacob Loring and Lucy Church Soule Pratt.

Dr. Pratt attended schools in Strong, graduated from Farmington High School, Bowdoin College in 1901 and received his medical degree from Bowdoin Medical School in 1904. Dr. Pratt interned at the Maine General Hospital from 1904 to 1905 and located in Farmington in 1905 where he practiced for over fifty years. He served in the Medical Corps with the Pershing Expedition in Mexico and in Europe during World War I.

Dr. Pratt was an Honorary member of the Franklin County Medical Society and the Maine Medical Association, having received a 50-year pin in 1954, a 55-year pin in 1959 and a 60-year pin in 1964. He was Councilor for the Second District of the Maine Medical Association from 1934 to 1937, President Elect from 1938 to 1939 and President of the Association from 1939 to 1940. Dr. Pratt served as Secretary to the Franklin County Medical Society for over forty years. He was also a member of the American Medical Association, had served as medical examiner for Franklin County, and was directly responsible for the establishment of Franklin County Memorial Hospital at Farmington and was one of the first surgeons to qualify for practice at the hospital. He also coached football and baseball at Farmington High School and served as a member of the school board for many years.

Surviving are a brother, Dr. Lyde S. Pratt of Waterville; two nephews, Dr. Loring W. Pratt of Waterville and Dr. Philip C. Pratt of Livermore.

Harold A. Pooler, M.D.
1900-1967

Harold A. Pooler, M.D., 67, of Bangor, Maine died on November 11, 1967. He was born in Skowhegan, Maine on September 26, 1900, son of Augustus and Anna D. Pooler.

Dr. Pooler graduated from Skowhegan High School in 1919, attended the University of Vermont and received his medical degree from the University of Vermont Medical School in 1927. He served a rotating internship at the North Wheeling Hospital in West Virginia from 1927 to 1928.

He practiced medicine at the Binghamton State Hospital in New York from 1928 to 1941 and served as Colonel in the U.S. Army as chief of neuropsychiatry at Fort Bragg, North Carolina from 1941 to 1946. Dr. Pooler located at the Utica State Hospital in New York from 1946 to 1949 and then came to Bangor where he served as superintendent at the Bangor State Hospital for eighteen years.

Dr. Pooler was a member of the Penobscot County Medical Association, the Maine Medical Association, the American Medical Association, the American Psychiatric Association, the American Academy of Psychotherapists, the American Academy of Psychosomatic Medicine, the American Society of Clinical Hypnosis, the Society of Clinical and Experimental

Hypnosis and the Bangor Medical Club. He was also a member of the State of Maine Board of Registration of Medicine, a diplomate of the American Board of Medical Hypnosis, and of the American Board of Psychiatry and Neurology, and a Certified APA Hospital Administrator.

Surviving are his widow, Adelaide Lancaster Pooler; two nieces, Mrs. Donald Hie of Skowhegan and Mrs. Mae McCoy of Dallas, Pennsylvania.

Rufus E. Stetson, M.D.
1886-1967

Rufus E. Stetson, M.D., 81, of Damariscotta, Maine died in Washington, D.C. on November 13, 1967. He was born in Damariscotta, Maine on August 10, 1886, son of Dr. Edward F. and Mary Chapman Stetson.

Dr. Stetson graduated from Lincoln Academy in 1904, Bowdoin College in 1908 and received his medical degree from the Columbia University College of Physicians and Surgeons in 1911. He interned at the Bellevue Hospital from 1912 to 1913, practiced medicine in New York City from 1913 to 1941 and then located in Damariscotta.

He was an Honorary member of the Lincoln-Sagadahoc County Medical Society and the Maine Medical Association, having received a 50-year pin in 1961 and a 55-year pin in 1966. He was also a member of the American Medical Association and the New York State Medical Society. Dr. Stetson was also chief of staff at the Miles Memorial Hospital, an overseer emeritus of Bowdoin College and in 1958 Bowdoin College awarded him the honorary degree of doctor of science.

Surviving are his widow, Erma Tierney Stetson; three sons, Edwin of Bethesda, Maryland and Camden; William W. of Arlington, Virginia and Damariscotta and Rufus E., Jr. of Wiscasset; two sisters, Mrs. Victor Blake of Warwick, New York and Mrs. Rex Dodge of Falmouth Foreside and eleven grandchildren.

Pierre E. Provost, M.D.
1909-1967

Pierre E. Provost, M.D., 58, of Augusta, Maine died at a Philadelphia hospital on November 16, 1967. He was born in Auburn, Maine on January 16, 1909, son of Pierre E. and Virginia Gagne Provost.

Dr. Provost graduated from Edward Little High School in 1928, Bates College in 1932 and received his medical degree from Boston University School of Medicine in 1936.

He practiced medicine in Augusta and for the past twenty years had been a physician for the Veterans Administration Center at Togus. During World War II he was a Lieutenant Commander in the Navy.

Dr. Provost was a member of the Kennebec County Medical Association, the Maine Medical Association, the American Medical Association, the New England Otological Society, the American Academy of Ophthalmology and Otolaryngology, the American College of Surgeons and was a diplomate of the American Board of Otolaryngology. He was also chief of the Eye, Ear, Nose and Throat Department at the Veterans Administration Center at Togus.

Surviving are his widow, Dr. Helen Curtis Provost; a son, Dr. Pierre E. Provost of Rosebud, South Dakota; a daughter, Mrs. Gerald N. Bragdon of Gardiner; two brothers, Dr. Normand T. Provost of Auburn and Dr. Adolph Provost of Manchester, New Hampshire; a sister, Miss Justina Provost of Auburn; five grandchildren and several nieces and nephews.

William R. McAdams, M.D.
1898-1967

William R. McAdams, M.D., 69, of Portland, Maine died on November 21, 1967. He was born in Lorena, Texas on November 11, 1898, son of William R. and Violet Hutchinson McAdams.

Dr. McAdams graduated from Baylor University in 1920 and received his medical degree from Baylor University College of Medicine in 1924. After completing an internship and residency at Manhattan N. Y. Eye and Ear Infirmary, Dr. McAdams practiced for several years in Wichita Falls, Texas and then returned to Manhattan Nose and Throat Infirmary. In 1931 he came to Portland and practiced there until his death.

He was a member of the Cumberland County Medical Association, the Maine Medical Association, the American Medical Association and the American Academy of Ophthalmology and Otolaryngology.

Surviving are his widow, Marguerite Lively McAdams; three brothers, Titus of Houston, Texas, Virgil of Kansas City, Missouri and Harry of Hobbs, New Mexico; three sisters, Mrs. Cortell Holsapple of Fort Worth, Texas, Mrs. Mary Parmela and Mrs. Cam Hoyen, both of Portland, Oregon and several nieces and nephews.

County Society Notes

KENNEBEC

The Kennebec County Medical Association met at the Veterans Administration Center at Togus, Maine on November 16, 1967. The meeting was called to order by Richard H. Dennis, M.D. in the absence of the President, Robert L. Ohler, M.D.

A committee report on community relations was presented by John D. Denison, M.D. The committee discussed the dissemination of information regarding the availability of physicians. It was thought that each hospital should set up its own coverage system and publicize it individually because of variations in setups from hospital to hospital. It was also recommended that doctors place a notice in their offices informing the patients where to receive medical care in situations in which personal physicians were not available. Dr. Denison then suggested that some thought be given to appointment of a councilor to the Maine Medical Association in June of 1968. He mentioned the dissatisfaction of the physicians in Washington County with the Maternity Care Program in that area. He noted that a physician was needed for a cruise with the Maine Maritime Academy ship.

The nominating committee was then appointed to draw a slate of officers for election in December. The committee consisted of Drs. George I. Gould, chairman, Earle M. Davis, Paul H. Pfeiffer and Howard H. Milliken.

Dr. Edwin Dunlop of Attleboro, Massachusetts was the

COUNTY SOCIETY OFFICERS

ANDROSCOGGIN

President, Daniel R. Shields, M.D., Lewiston
Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

President, George F. Higgins, M.D., Presque Isle
Secretary, George J. Harrison, M.D., Houlton

CUMBERLAND

President, Eugene P. McManamy, M.D., Portland
Secretary, Stanley B. Sylvester, M.D., Portland

FRANKLIN

President, Wallace H. Duffy, M.D., Farmington
Secretary, Maynard B. Colley, M.D., Farmington

HANCOCK

President, John D. McIntyre, M.D., Ellsworth
Secretary, Bradley E. Brownlow, M.D., Blue Hill

KENNEBEC

President, Richard H. Dennis, M.D., Waterville
Secretary, Francis A. Spellman, M.D., Togus

KNOX

President, Merrill J. King, Jr., M.D., Rockland
Secretary, Barbara L. Fuller, M.D., Rockland

LINCOLN-SAGADAHOC

President, Charles E. Burden, M.D., Bath
Secretary, George W. Bostwick, M.D., Newcastle

OXFORD

President, Linwood M. Rowe, M.D., Rumford
Secretary, Hagop Halladjian, M.D., Rumford

PENOBSCOT

President, Leonard G. Miragliuolo, M.D., Bangor
Secretary, William M. Shubert, M.D., Bangor

PISCATAQUIS

President, Charles H. Lightbody, M.D., Guilford
Secretary, Isaac Nelson, M.D., Greenville

SOMERSET

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Secretary, John P. Dow, M.D., Pittsfield

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President, John A. Caswell, M.D., Belfast
Secretary, Seth H. Read, M.D., Belfast

WASHINGTON

President, Walter A. Mendyka, M.D., Machias
Secretary, Karl V. Larson, M.D., East Machias

YORK

President, Eugene P. Wolfahrt, M.D., Saco
Secretary, Charles W. Kinghorn, M.D., Kittery

guest speaker. He discussed psychiatric problems dealing chiefly on that of depression and commented on its prevalence, its relationship to suicides, symptoms and treatment with drugs.

LUCIEN F. VEILLEUX, M.D., *Secretary*

KNOX

A meeting of the Knox County Medical Society was held at The Sail Loft in Rockport, Maine on December 5, 1967. The following officers were elected for 1967-1968:

President, Merrill J. King, Jr., M.D., Rockland
Vice-President, Paul A. Millington, M.D., Camden
Secretary-Treasurer, Barbara L. Fuller, M.D., Rockland
Delegates to the M.M.A. House of Delegates: Drs. Thomas W. Williams and Onni C. Kangas, both of Rockland. Alternate: Dr. Mustafa V. Onat, St. George
Censor, Oram R. Lawry, Jr., M.D., Rockland

WILLIAM W. WARD, M.D., *Secretary*

HANCOCK

The annual business meeting of the Hancock County Medical Society which was held at the Brookside Restaurant in Ellsworth, Maine on December 13, 1967 was preceded by a divertissement in the form of the famous Irish and family anecdotes of Francis J. O'Connor, M.D. accompanying a color film of Ireland made by himself with the help of his son, Robert. Following this extremely entertaining presentation, a brief business meeting was held during which the following officers were nominated and elected for 1967-1968:

President, John D. McIntyre, M.D., Ellsworth
Vice-President, Winston G. Stewart, M.D., Bar Harbor
Secretary-Treasurer, Bradley E. Brownlow, M.D., Blue Hill
Delegates to the M.M.A. House of Delegates: Drs. Eliot T. Stadler, West Gouldsboro and Robert D. Wilson, Bar Harbor. Alternates: Drs. George G. Fuller, Ellsworth and Richard W. Britt, Blue Hill
Censors: Drs. Walton P. C. Clason, Ellsworth (3 yrs.), Robert F. Russell, Penobscot (2 yrs.) and Charles H. Knickerbocker, Bar Harbor (1 yr.)

Drs. Stewart and Morris A. Lambdin were selected to represent Hancock County at the forthcoming meeting of the Maine Medical Association Council to discuss the controversial Maternal and Infant Care project presently operating in Hancock and Washington counties.

BRADLEY E. BROWNLOW, M.D., *Secretary*

PENOBSCOT

Officers for 1967-1968:

President, Leonard G. Miragliuolo, M.D., Bangor
President-Elect, Lloyd Brown, M.D., Bangor
Secretary, William M. Shubert, M.D., Bangor
Treasurer, Thornton W. Merriam, Jr., M.D., Bangor
Delegates to the M.M.A. House of Delegates: Drs. Lloyd Brown, Warren G. Strout and Charles D. McEvoy, Jr., all of Bangor, Bourcard Nesin, Howland and John J. Pearson, Old Town. Alternates: Drs. Thornton W. Merriam, George O. Chase and Leonard G. Miragliuolo, all of Bangor, Irvin E. Hamlin, E. Millinocket and Russell M. Lane, Orono
Councilors, Drs. Wilfred I. Butterfield, Lincoln (3 yrs.), Edward L. Curran (2 yrs.) and Richard V. Duffey (1 yr.), both of Bangor

WILLIAM M. SHUBERT, M.D., *Secretary*

New Members

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George B. Shaw, M.D., Broadway, Machias 04654



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Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant patients, since the drug may cross the placental barrier and adverse reactions which may occur in the adult (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Hygroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Hygroton should be discontinued and potassium supplements given, provided the



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A nice way to treat the Mrs. Larsons in your practice.

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does not have marked oli-

ecial care in cirrhosis or ischemic heart disease and nts receiving corticoste- CTH, or digitalis. Salt re- n is not recommended.
e Reactions: Nausea, gastric n, vomiting, anorexia, con- n and cramping, dizziness, ss, restlessness, hyperglyhyperuricemia, headache, cramps, orthostatic hypotension, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.
Average Dosage: 50 or 100 mg. with breakfast daily or 100 mg. every other day.
Availability: White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000.
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and new 50 mg. Hygroton



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Hygroton 50 mg. offers convenience for your patients who are halving the 100 mg. tablets or taking one every other day.

Geigy

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Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
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News and Notes

Department of Health and Welfare
Division of Maternal and Child Health
Including Services for Crippled Children

(By Appointment Only)

Orthopedic Clinics

Augusta – Augusta General Hospital
1:00 p.m.: Apr. 25, Aug. 22, Dec. 26
Bangor – St. Joseph Hospital
9:00 a.m. and 1:00 p.m.: Jan. 25, Mar. 28, May 23, July 25, Sept. 26, Nov. 21
Half-day sessions: 1:00 p.m.: Feb. 15, Apr. 25, June 27, Aug. 22, Oct. 24, Dec. 26
Fort Fairfield – Community General Hospital
9:00 a.m. and 12:30 p.m.: Mar. 11, May 13, July 8, Sept. 9, Nov. 4
Fort Kent – Peoples Benevolent Hospital
10:00 a.m. Mar. 12, May 14, July 9, Sept. 10, Nov. 5
Houlton – Aroostook General Hospital
9:00 a.m.: Mar. 14, May 16, July 11, Sept. 12, Nov. 7
Lewiston – Central Maine General Hospital
9:00 a.m. and Bracing Clinic at 12:30 p.m. (In conjunction with CMGH): Jan. 19, Feb. 16, Mar. 15, Apr. 12, May 17, June 21, July 19, Aug. 16, Sept. 20, Oct. 18, Nov. 15, Dec. 20
Machias – Down East Community Hospital
9:00 a.m.: Jan. 26, Apr. 26, July 26, Nov. 22
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Monday (holidays excepted)
Presque Isle – Arthur R. Gould Memorial Hospital
9:00 a.m. and 12:30 p.m.: Mar. 13, May 15, July 10, Sept. 11, Nov. 6
Waterville – Thayer Hospital
1:30 p.m.: Feb. 15, June 27, Oct. 24

Cardiac Clinics

Bangor – St. Joseph Hospital
9:00 a.m.: Jan. 26, Feb. 9, 23, Mar. 8, 22, Apr. 12, 26, May 10, 24, June 14, 28, July 12, 26, Aug. 9, 23, Sept. 13, 27, Oct. 11, 25, Nov. 8, 22, Dec. 13, 27
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Friday (holidays excepted)

Pediatric Clinics

Bangor – St. Joseph Hospital
1:30 p.m.: Jan. 26, Feb. 23, Mar. 22, Apr. 26, May 24, June 28, July 26, Aug. 23, Sept. 27, Oct. 25, Nov. 22, Dec. 27
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Mar. 27, July 24, Nov. 27
Houlton – Madigan Memorial Hospital
1:30 p.m.: Apr. 17, Aug. 14, Dec. 11

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Presque Isle – Arthur R. Gould Memorial Hospital
1:30 p.m.: Jan. 24, Feb. 28, May 29, June 26, Sept. 25, Oct. 23

Cleft Palate Evaluation Clinics

Portland – Maine Medical Center
10:00 a.m: Feb. 13, May 14, Sept. 10, Nov. 12

Clinics for Mentally Retarded Preschool Children

Waterville – Thayer Hospital
9:00 a.m.: Jan. 17, 31, Feb. 7, 21, Mar. 6, 20, Apr. 3, 17, May 1, 15, 29, June 5, 19, July 3, 17, 31, Aug. 7, 21, Sept. 4, 18, Oct. 2, 16, 30, Nov. 6, 20, Dec. 4, 18
Lewiston – Central Maine General Hospital
9:00 a.m.: Feb. 12, Mar. 11, Apr. 8, May 13, June 10, July 8, Aug. 12, Sept. 9, Oct. 14, Nov. 4, Dec. 9
Lewiston – St. Mary's General Hospital
9:00 a.m.: Jan. 22, Feb. 26, Mar. 25, Apr. 22, May 27, June 24, July 22, Aug. 26, Sept. 23, Oct. 28, Nov. 25, Dec. 23

Cystic Fibrosis Clinics (In conjuction with the CMGH & MMC)

Lewiston – Central Maine General Hospital
9:00 a.m.: Feb. 2, Mar. 1, Apr. 5, May 3, June 7, July 5, Aug. 2, Sept. 6, Oct. 4, Nov. 1, Dec. 6
Portland – Maine Medical Center
9:00 a.m.: Feb. 20, Mar. 19, Apr. 16, May 21, June 18, July 16, Aug. 20, Sept. 17, Oct. 15, Nov. 19, Dec. 17

Convulsive Clinics

Fort Fairfield – Community General Hospital
(To be scheduled)

Hemophilia Clinic

Portland – Maine Medical Center
Appointments made through this office on an individual basis
Out-patient service at the Maine Coast Memorial Hospital, Ellsworth, for pediatric, epilepsy and orthopedic services will be arranged by appointment only

Family Planning Clinics

Portland – Maine Medical Center
First and third Thursday, every month. Morning clinic.
Bangor – Eastern Maine General Hospital
First and third Friday, every month. Morning clinic.

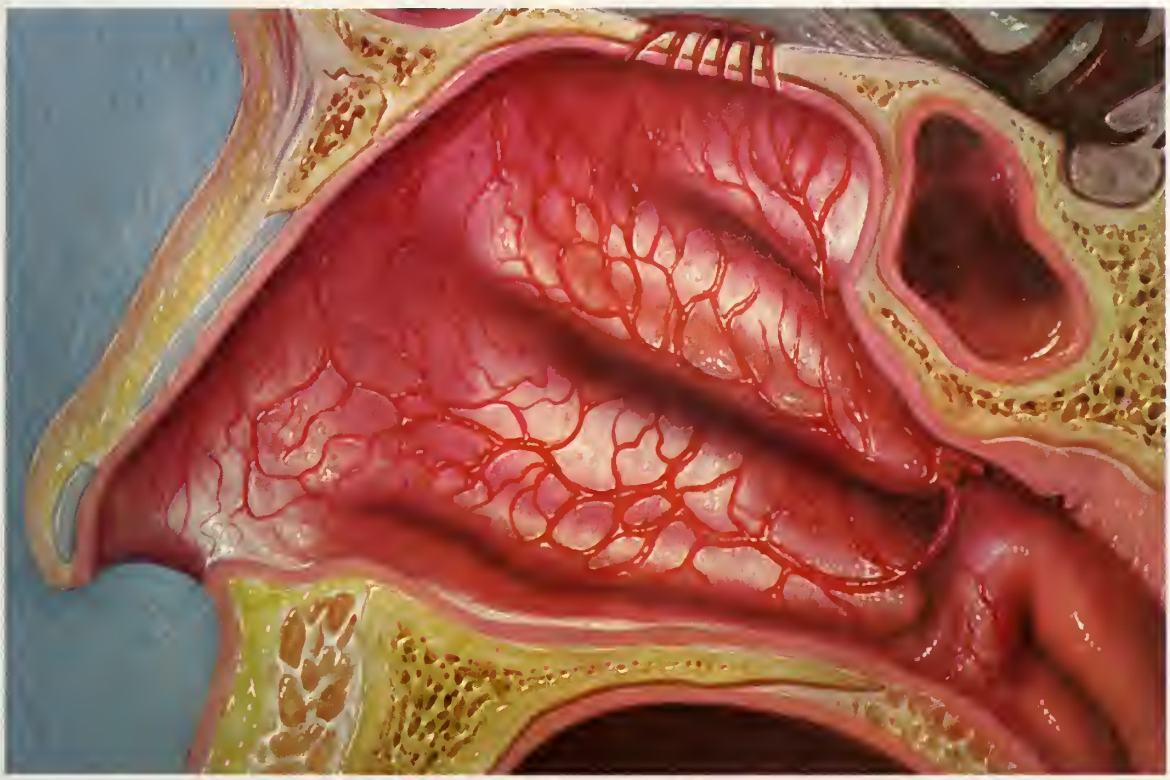
ACROSS THE DESK
Continued from Page 19

school tuition and subsistence pay to doctors "Who agree to spend four years in the medically underprivileged areas." He urged creation of new categories of health professionals to assist doctors, the promotion of more and better teaching in medical schools, and creation of a Federal department of health "to protect and enlarge the citizen's interest in better health care." – *The Blue Cross Digest,* Dec. 20, 1967

winter 1968

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska 68501. Address communications to Keith W. Sehnert, M.D., Medical Director.





this issue: the cold in pregnancy...

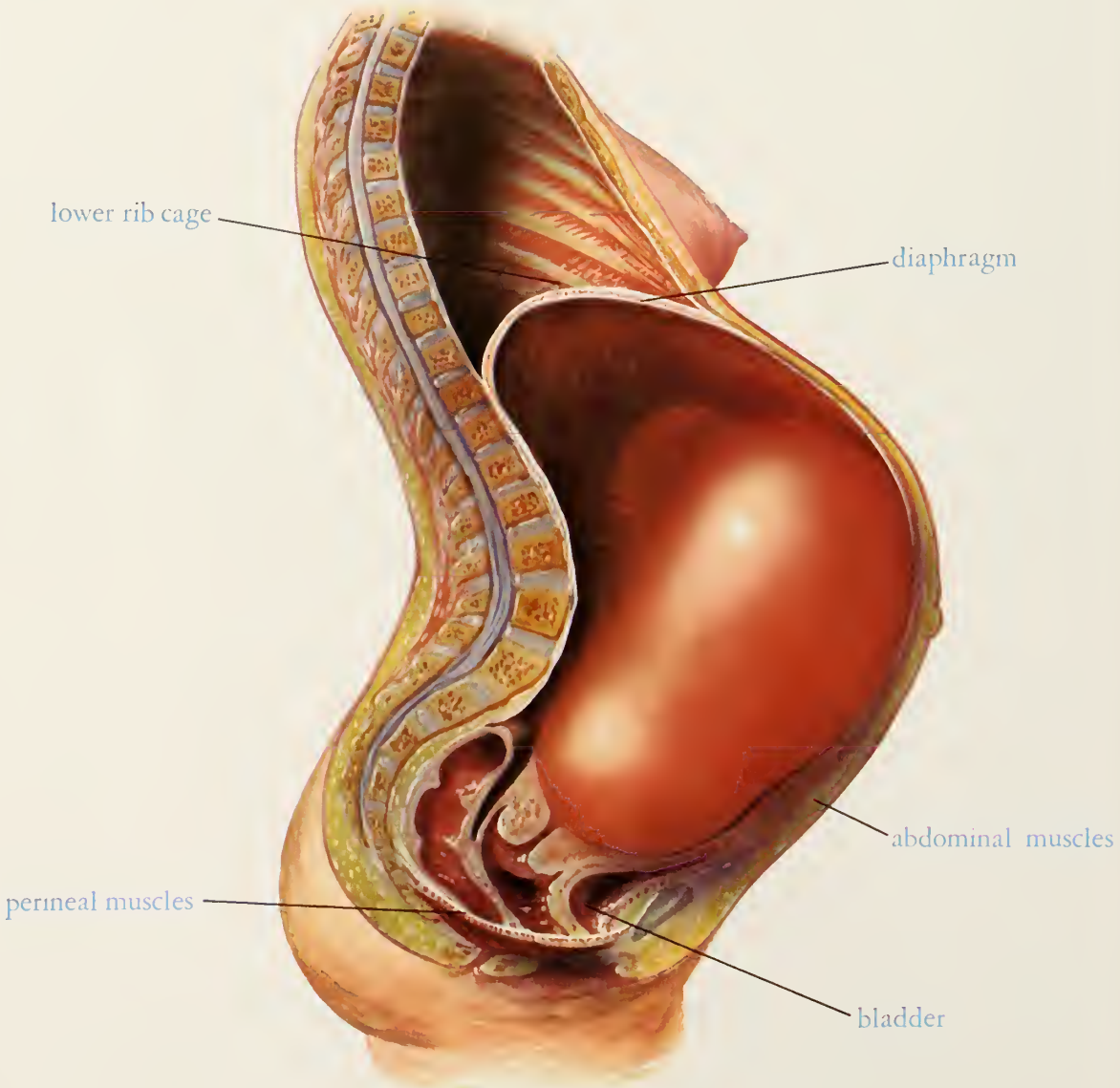
the cold in pregnancy

Frederick W. Goodrich, Jr., M.D.
Senior Obstetrician and Gynecologist, Lawrence and Memorial Hospital, New London, Connecticut

Since pregnancy and the common cold are both ubiquitous, it is not surprising that they often occur at the same time in the same patient. Incidence figures are hard to come by, but the chances are very good that any given pregnant woman will have a cold at some time during the nine months of her gestation. When she does, she will tell you that it is the worst cold she ever had. It seems to last longer and the symptoms are more distressing than they are in the non-pregnant.

For purposes of this discussion, the common cold is considered to be the well-known symptom complex which includes sore throat, stuffy nose, and a cough. Febrile states or extension of the disease process into the lower respiratory tree are not part of the common cold and will not be included in this discussion.

The clinical picture of a cold in pregnancy can be confused by a long-known physiological phenome-



non. Kiesselbach's area in the nose (on the anterior part of the nasal septum above the intermaxillary bone) becomes engorged, apparently due to hyperemia induced by the increased estrogen level which accompanies pregnancy. The amount of congestion can vary in degree from woman to woman. Some have very little congestion, others will have occasional nosebleeds from this area, still others will have symptomatic congestion to the degree that they will complain of having a "chronic" or constant cold.

Less well recognized is the occurrence of this type of hyperemia in any part of the nasopharyngeal mucosa, again in varying degree. Such swelling often produces a postnasal drip which, the patient will state, is present only when she is pregnant. Patients who do not have symptomatic congestion ordinarily, will find that when they do get a cold, the symptoms last much longer than those of a cold usually do. Occasionally, this hyperemia is responsible for closure of the medial end of the Eustachian tube; such patients will complain of "plugging" of the ears. Inspection of the ear drum will show a depression which confirms the presence of Eustachian closure rather than wax in the canal which is the patient's diagnosis. Symptoms related to this physiological congestion are more apt to occur in heavier smokers or those who have a history of allergic rhinitis, just as are the symptoms of the common cold. And when the cold does occur in pregnancy, the symptoms are worse because of the underlying congestion.

The pregnant woman with a cold is miserable for other reasons, dependent somewhat on her parity and the length of her gestation. As parity increases, so also does the relaxation of the abdominal and perineal musculature. The uterus, lying against a slack abdominal wall, and bearing down on relaxed perineal muscles, acts like a piston when the patient coughs, sneezes, or even blows her nose, pushing down on the bladder. Stress incontinence during colds is almost the rule.

As the length of gestation increases, so does the size of the uterus. As it grows, it pushes the abdominal contents above it and elevates the diaphragm. This results eventually in a lateral displacement of the lower rib cage, often to a point at which the patient will complain of soreness in this area. If such a

(Concluded on following page)

From a continuing study on nasal congestion...



timed to work while your patient does

A study begun in 1966 by the Department of Otolaryngology, Greater Baltimore Medical Center, has accumulated evidence that documents the effectiveness of Triaminic's timed-release action in the treatment of nasal congestion.

With its balanced formulation of an oral nasal decongestant and two antihistamines, Triaminic effected partial or complete relief in more than 82% of the 85 subjects treated. Clearing nasal obstruction. Reducing turbinate swelling. Making breathing easier.

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Triaminic® *timed-release tablets*

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50mg.
Pyrilamine maleate	25mg.
Pheniramine maleate	25mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

(Advertisement)

patient has a cold, the coughing and sneezing will exaggerate this soreness. The diaphragmatic restriction caused by the enlarging uterus also makes breathing more difficult, particularly when the patient lies down. A cold compounds this difficulty.

Treating a cold in pregnancy requires two additional considerations. The patient should be told that the symptoms may last longer lest she become discouraged, and she should be reassured that the treatment will not damage the fetus. Although there are still some women who seem blissfully ignorant regarding matters of health (and these need to be cautioned not to take medication recommended by friends), most of our maternity patients are aware of the thalidomide tragedy. These women need constant reassurance that the symptoms of a cold can be treated, and that the medication is safe. Fortunately, many of the drugs which are of benefit have been in use long enough and widely enough so that such a statement can be offered. Occasionally one encounters a patient who is so anxious to avoid medication that she is extremely reluctant to take anything at all. Since cold is self-limited, it seems reasonable enough to give such a patient the choice and not to force drugs on her if she is obviously afraid of taking them.

The most distressing symptom of the common cold is the nasal congestion. This can be mitigated by the use of a decongestant which will help reduce the postnasal drip and the coughing caused by it. The kind of a cough which is described as a "tickling" in the throat and which is apt to occur when the patient goes to bed is usually due to nasopharyngeal congestion rather than inflammation in the lower respiratory tract.

There are many cough mixtures available. Most contain an antihistamine, a decongestant, and a cough "suppressant." Should cough suppression be desirable, it is important to remember not to use both a decongestant tablet and such a cough mixture as the patient would be getting a double dose of the decongestant. With some patients, the placebo effect of a cough syrup may be important and a liquid preparation might be substituted for an oral tablet.

For a sore throat, candy drops or lozenges at frequent intervals are soothing. It is not only unnecessary but unwise to use antibiotic lozenges or drops. The use of antibiotics in an uncomplicated cold is contraindicated and should be scrupulously avoided.

In summary, a cold in pregnancy is more severe and longer lasting. The treatment of the symptoms with local and systemic decongestants will make the patient more comfortable.

Apparently the cold is so common in pregnancy that it has received very little attention in the literature. References are almost non-existent and the few which are available add little to the common knowledge, are out-dated, or are not helpful. Thus the usual bibliography is not appended.



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Each teaspoonful (5 ml.) contains:

Phenylpropanolamine hydrochloride	12.5 mg.
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For nasal congestion you can bring quick, lasting comfort to your little patients with Triaminic Syrup. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

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Each capsule contains:	
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Vitamin B_6 (Pyridoxine HCl)	2 mg
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Niacinamide	100 mg
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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See *Precautions.*)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories, Division of Hoffmann-La Roche Inc. Nutley, N.J. 07110

References: 1. Selesnick, S. T., and Clemens, T. L.: From research film "Motion Picture Films in Psychosomatic Research," available from Roche Laboratories. 2. Clemens, T. L., and Selesnick, S. T.: *Dis. Nerv. System, 28*:98, 1967.

VALIUM® (diazepam) Roche®

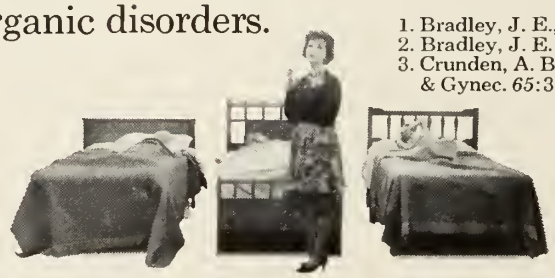
useful for somatic symptoms of psychic tension



Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

TELEPHONE
774-8276 FOR

Insurance for Members

OFFICIALLY ENDORSED by the

MAINE MEDICAL ASSOCIATION

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107 EXCHANGE STREET, PORTLAND

D&P
AN ANCHOR TO WINDWARD


on call...
Keflin®
Sodium
Cephalothin
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Eli Lilly and Company
Indianapolis, Indiana 46206

If hypothyroidism leaves your patient feeling like this...

consider

LETTER®

(SODIUM LEVOTHYROXINE, ARMOUR) TABLETS

Synthetic Thyroid Replacement Therapy



Letter® provides all the advantages of the synthetically pure chemical sodium levothyroxine. Dosage is precise and potency is consistently uniform.

and

Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

ARMOUR PHARMACEUTICAL COMPANY • CHICAGO, ILLINOIS



treat one . . . six people benefit

The brunt of senility falls on the family as much as the patient. But usually within one or two days, 'Thorazine' can control senile anxiety and fear . . . dispel the confusion shown by nighttime wandering and chattering . . . restore appetite and interest in personal grooming. Treat the senile patient with 'Thorazine'—the whole family can benefit.

Before prescribing, see complete information, including adverse effects reported with phenothiazines and symptoms and treatment of overdosage, in SK&F literature or *PDR*. The following is a brief precautionary statement.

Contraindications: Comatose states or the presence of large amounts of C.N.S. depressants.

Precautions: Potentiation of C.N.S. depressants may occur (reduce dosage of such agents when used concomitantly). Use with caution in patients with chronic respiratory disorders. Antiemetic effect may mask overdosage of toxic drugs or obscure other conditions. Administer in pregnancy only when necessary. Because of possible drowsiness use cautiously and warn patients who operate vehicles or machinery.

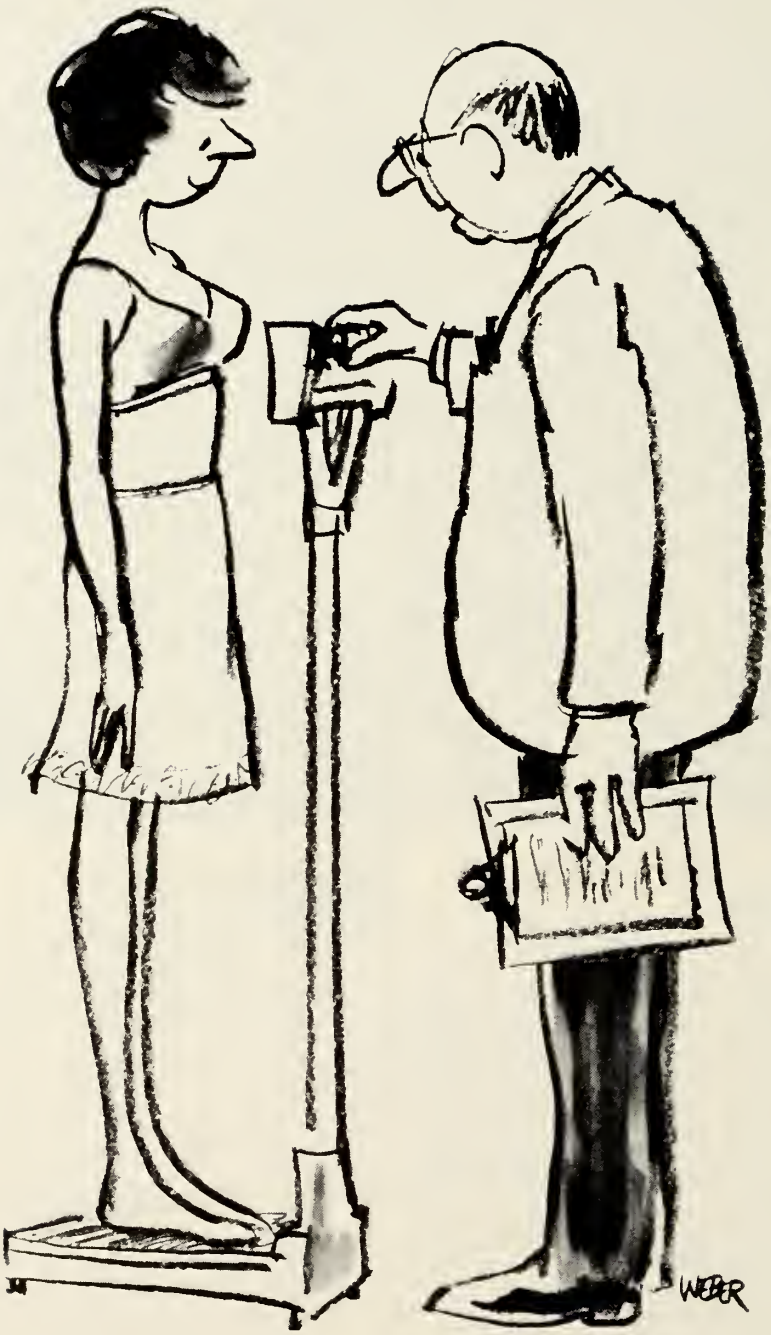
Adverse Reactions: Drowsiness; dry mouth; nasal congestion; constipation; amenorrhea; miosis; mild fever; weight gain; hypotensive effects, sometimes severe with I.M. administration; epinephrine effects may be reversed; dermatological reactions; parkinsonism-like symptoms on high dosages (in rare instances, may persist); lactation and moderate breast engorgement (in females on high dosages); and less frequently, cholestatic jaundice (use cautiously in patients with liver disease). Adverse reactions occurring rarely, include: mydriasis; agranulocytosis; skin pigmentation; epithelial keratopathy; lenticular and corneal deposits (after prolonged substantial doses).

Available: Tablets, 10 mg., 25 mg., 50 mg., 100 mg. and 200 mg.; Spansule® capsules, 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg.; Injection, 25 mg./cc.; Syrup, 10 mg./5 cc.; Suppositories, 25 mg. and 100 mg.

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Smith Kline & French Laboratories

in senile agitation . . . Thorazine® brand of chlorpromazine



"Good girl! You're down seven pounds!"

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-amphetamine sulfate (15 mg.) with Meprobamate (300 mg.) **Sustained Release Capsules**

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York

484-7

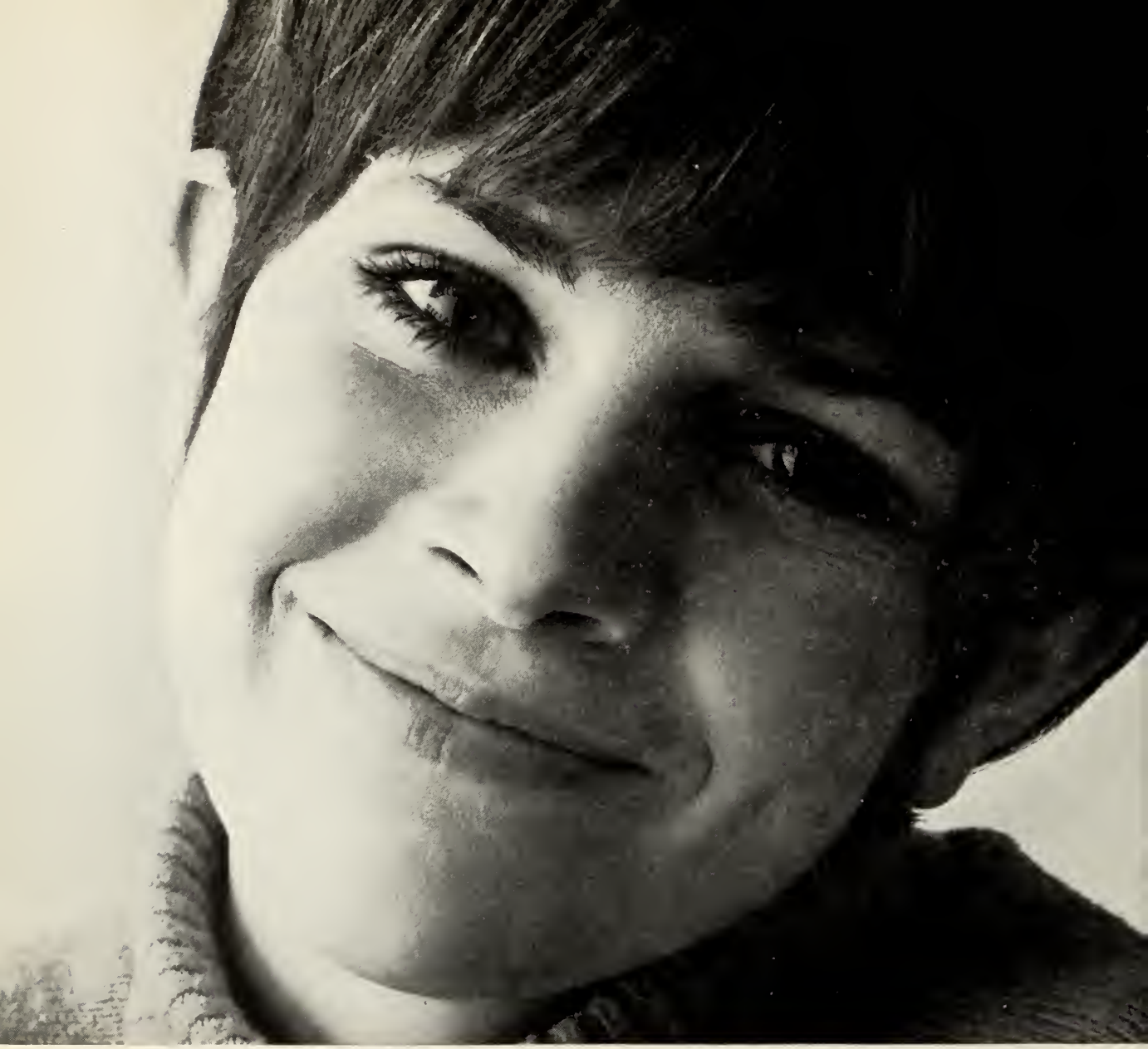


Photo professionally posed.

No injection after all!

This penicillin produces high, fast levels—orally.

Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

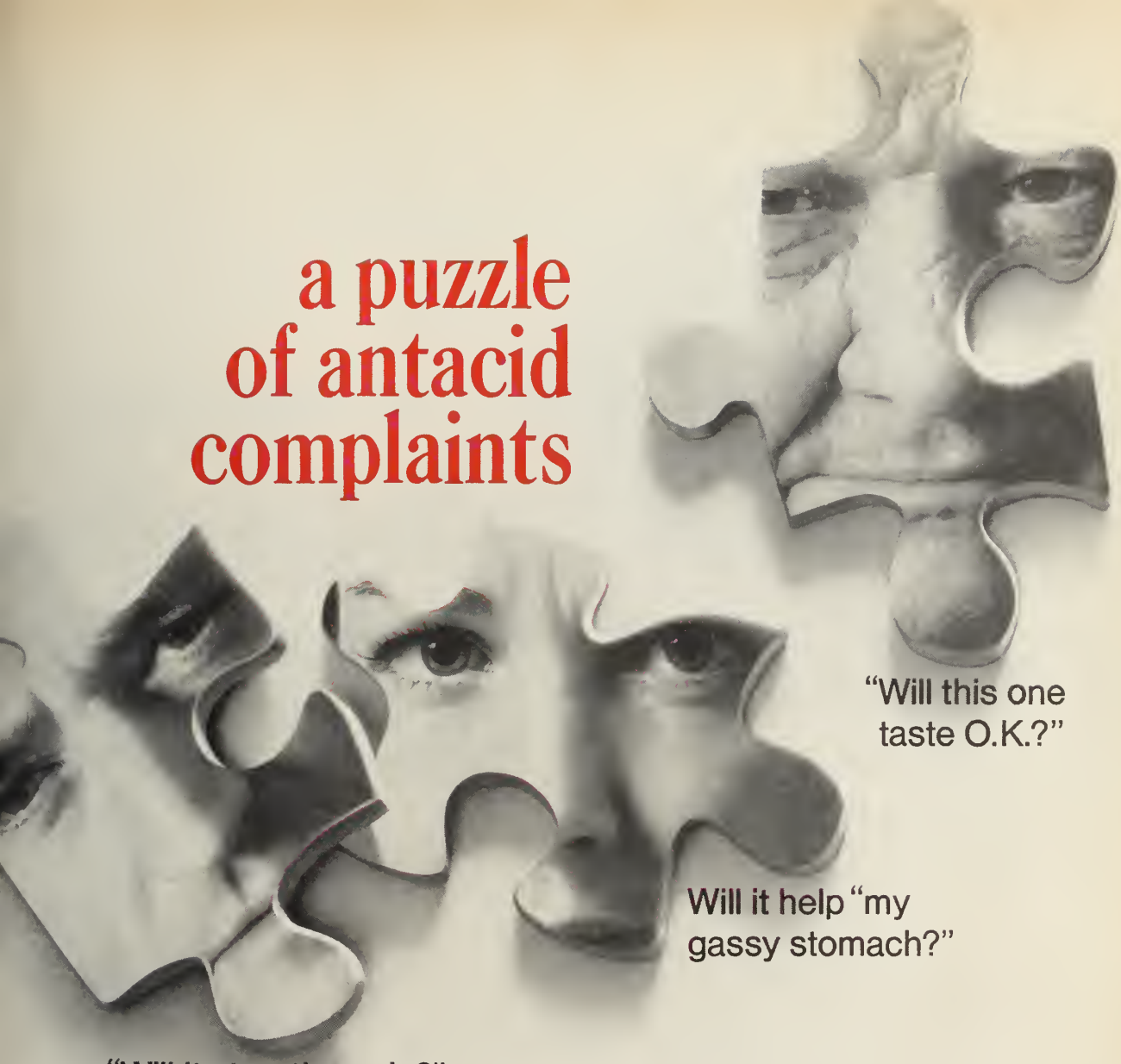
Indications: Infections susceptible to oral penicillin G; propnylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization). Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL **PEN•VEE® K**

(potassium phenoxymethyl penicillin) Wyeth

a puzzle of antacid complaints



Mylanta®

aluminum and magnesium hydroxide *plus* simethicone

a solution to peptic ulcer distress

Effective neutralization—
with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

Concomitant relief of G.I. gas distress—
with the proven[1] defoaming action of simethicone.

Prolonged acceptance confirmed—
in 87.5% of 104 patients after a total of 20,459 documented days of therapy.[2]

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg.
Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

References: 1. Hoon, J. R.: Arch. Surg. *93*:467 (Sept.) 1966.
2. Danhof, I. E., Personal communication.

Stuart

Division/Pasadena, Calif.
ATLAS CHEMICAL INDUSTRIES, INC.

new evidence for TAO® (triacetyl-oleandomycin)

a macrolide antibiotic for the frequently seen respiratory infection in the office and for a problem pathogen* in the hospital.

*Staphylococcus aureus

study I[1]

Results of a 1967 in vitro—in vivo correlation study involving 116 patients with Gram-positive coccal infections in five institutions. All patients were given TAO prior to determining the susceptibility of the offending organism.

97.0%
of the organisms were susceptible to oleandomycin*

98.0%
of the patients responded favorably to TAO® (triacetyloleandomycin)

*In some cases more than one pathogenic organism was isolated from the patient.

study II[2]

Effect of oral therapy with TAO, erythromycin, and cloxacillin on the survival time of Rhesus monkeys after intravenous inoculations of lethal doses of staphylococci, phage type 80/81. (8 monkeys in each group)

conclusion:

*Under the conditions of this study and the doses employed, it was found that

TAO® (triacetyl-oleandomycin)

was far superior to erythromycin, as was cloxacillin, a bactericidal agent, and of particular interest, "...bacteriostatic triacetyloleandomycin was as effective or perhaps superior to cloxacillin in preventing lethal (staphylococcal, phage type 80/81) infection."

*It should be pointed out that results obtained in an experimental study of this nature may not necessarily be directly extrapolated to the clinical situation as it pertains to man.

TAO Rx Information

INDICATIONS: Include streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **CONTRAINDICATIONS AND PRECAUTIONS:** Not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including darkfield examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

References: 1. Isenberg, H. D.: Clinical Evaluation of Laboratory Guidance to Antibiotic Therapy; Health Laboratory Science (July) 1967. 2. Saslaw, S., Carlisle, H. N.: Studies on Therapy of Staphylococcal Infections in Monkeys. 1. Comparison of Cloxacillin, Triacetyloleandomycin and Erythromycin. Proc. Soc. Exp. Biol. & Med.: Vol. 125, No. 4 (Aug.-Sept.) 1967.

ROERIG Rx
J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

For your impatient cold patients

Two sprays from NTZ Nasal Spray—and nasal congestion, rhinorrhea, sneezing are reduced for *immediate* comfort for patients with colds.

NTZ is more than a simple vasoconstrictor. It contains:

Neo-Synephrine® **(brand of phenylephrine) HCl 0.5 per cent,** the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction on contact.

Thenfadil® **(brand of thenyldiamine) HCl 0.1 per cent,** topical antihistamine for reduction of rhinorrhea, sneezing or itching. It combats the allergic reactions that may occur in colds or sinusitis.

Zephiran® **(brand of benzalkonium, as chloride, refined) 1:5000,** antiseptic preservative and wetting agent to promote penetration and spread of the formula.

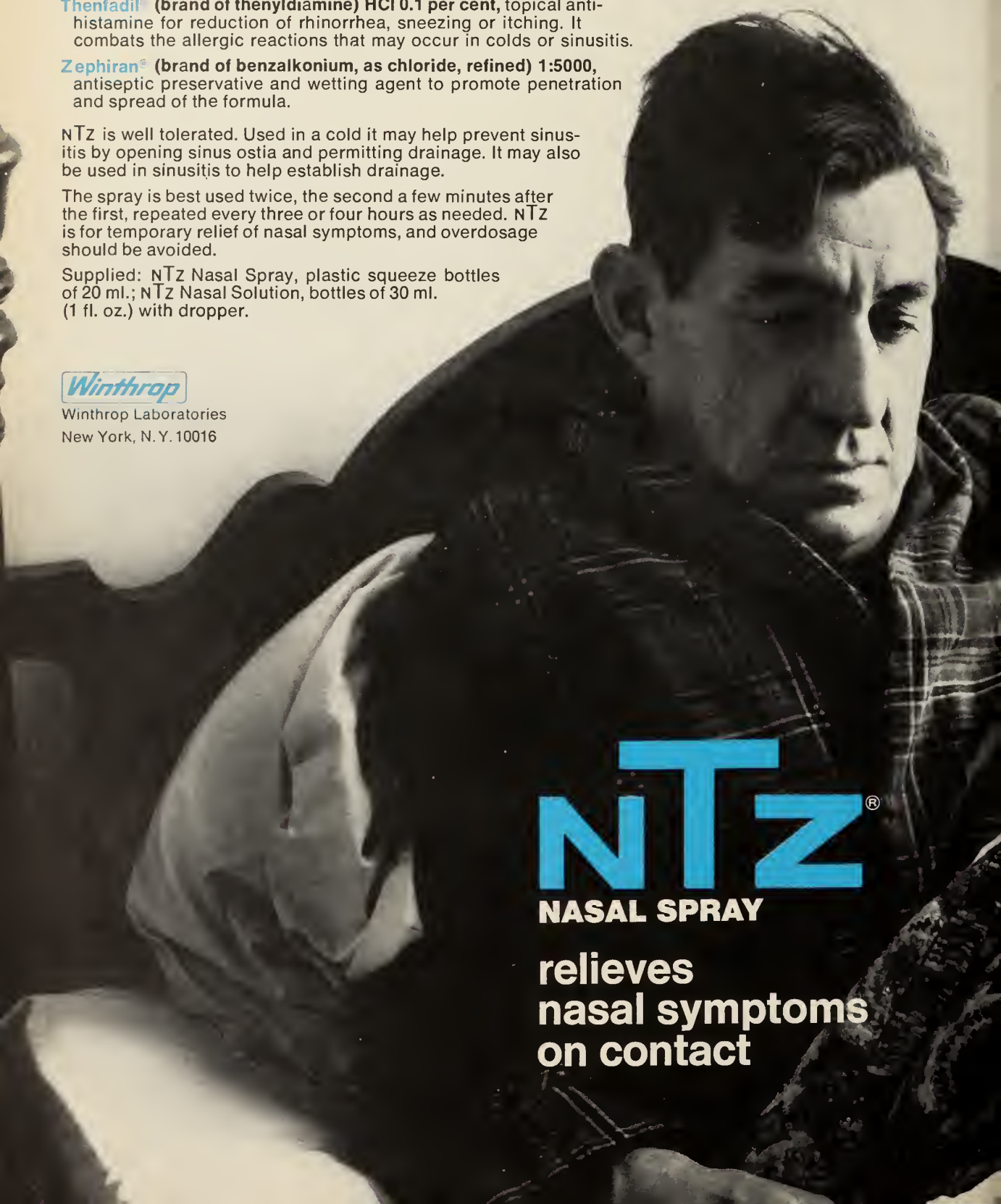
NTZ is well tolerated. Used in a cold it may help prevent sinusitis by opening sinus ostia and permitting drainage. It may also be used in sinusitis to help establish drainage.

The spray is best used twice, the second a few minutes after the first, repeated every three or four hours as needed. NTZ is for temporary relief of nasal symptoms, and overdosage should be avoided.

Supplied: NTZ Nasal Spray, plastic squeeze bottles of 20 ml.; NTZ Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

Winthrop

Winthrop Laboratories
New York, N.Y. 10016



NTZ®
NASAL SPRAY

relieves
nasal symptoms
on contact

BLUE CROSS SUBSCRIBERS PLEASE TAKE NOTICE

Benefits Of Subscriber's Contract "F" Being Liberalized Without Rate Change

Please File This Notice With Your Contract

The shift to Medicare of the principal hospitalization expense for a large segment of our membership has made possible this announcement of liberalized benefits for 1968 at no increase in subscription charges.

DESCRIPTION OF BENEFIT CHANGES FOR CONTRACT "F"

When certain benefits of Contract "F" are being supplemented by a special group contract, this explanation of liberalized benefits applies only to those areas of coverage which remain at a lesser amount than the new liberalized benefits.

Areas of Coverage to be Changed	Old Benefit For Admissions Prior to January 1, 1968	New Benefit For Admissions on or After January 1, 1968 **
Total Benefit Days, per Period of Disability	121 Days	No Change
MAJOR BENEFIT PERIOD	21 Days	31 Days
For non-maternity care: Daily Allowance for room, meals and regular nursing care	$9 to $42, according to level of benefits to which member subscribes	No Change
Other covered services (See "F" Contract)	No Change	No Change
EXTENDED BENEFIT PERIOD	100 Days	90 Days
Total allowance per day, if the daily room allowance for the Major Benefit Period would be:	Non-Group / Qual. Group	Group or Non-Group
$ 9	$ 3.50 / $ 6.00	$ 9.00
12	6.50 / 9.00	12.00
15	9.50 / 12.00	15.00
18	12.50 / 15.00	18.00
21	15.50 / 18.00	21.00
24	18.50 / 21.00	24.00
27	21.50 / 24.00	27.00
30	24.50 / 27.00	30.00
33	27.50 / 30.00	33.00
36	30.50 / 33.00	36.00
39	33.50 / 36.00	39.00
42	36.50 / 39.00	42.00
FOR MATERNITY CARE: **		
Daily Room Allowance For mother	$9.00	* $20.00
New born care: After discharge of mother	$2.50	* Hospital's usual charge up to $15 for covered services

* These allowances will not exceed the non-maternity room allowance to which the member or parent subscribes

** The new liberalized maternity and new born care benefits will be determined according to the level of coverage held 270 days prior to the date of admission for maternity care.

ASSOCIATED HOSPITAL SERVICE OF MAINE
509 — 517 Forest Avenue, Portland, Maine 04101

in moderate hypertension and
poorly controlled mild hypertension
(when diuretics or sedatives are inadequate, for example)



When your patients expect a lot...

like relief from hypertensive symptoms
(headache, fatigue, nervousness, palpitation or insomnia, for example)

like an up-to-date, once-a-day dosage schedule
(a schedule not unlike timed-release medication, for example)

like a daily dose of medication for peanuts
(at 10¢ a tablet, for example)

like generally well-tolerated therapy
(as described in the package insert, for example)

...give them a little
(one tablet daily)

Regroton®

chlorthalidone 50 mg., reserpine 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Regroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-B
For details, see complete Prescribing Information.

Geigy Pharmaceuticals, Division of
Geigy Chemical Corporation, Ardsley, N.Y.

Geigy

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"Man's best friend" in wintertime diarrheas

In winter "flu" and viral gastroenteritis, Donnagel (4 oz. size!) can bring aid and comfort to sufferers from both diarrhea and its discomforts because it contains kaolin and pectin plus belladonna alkaloids (as in Donnatal®). Donnagel treats the whole diarrhea problem. Available on your prescription or recommendation. A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

CLEAR THE TRACT! ROBITUSSIN®



THERE'S A FORMULATION FOR EVERY COUGHING NEED

All the Robitussins contain glyceryl guaiacolate, the outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Alcohol, 3.5%

For unproductive allergic coughs
ROBITUSSIN® A-C
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Pheniramine maleate . . . . . 7.5 mg.
Codeine phosphate . . . . . 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hour cough control
ROBITUSSIN®-DM
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Dextromethorphan hydrobromide . 15.0 mg.
Alcohol, 1.4%

New! Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN®-PE
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Phenylephrine hydrochloride . . . 10.0 mg.
Alcohol, 1.4%

	ROBITUSSIN	ROBITUSSIN A-C	ROBITUSSIN-DM	ROBITUSSIN-PE
EXPECTORANT	●	●	●	●
DEMULCENT	●	●	●	●
COUGH SUPPRESSANT		●	●	
ANTIHISTAMINE		●		
LONG-ACTING (6-8 HOURS)			●	
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(in Libritabs™)
(chlordiazepoxide)

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 50. Libritabs™ (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100. With respect to clinical activity, capsules and tablets are indistinguishable.

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June 9, 10, 11

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THE JOURNAL
of
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Thayer Hospital Number

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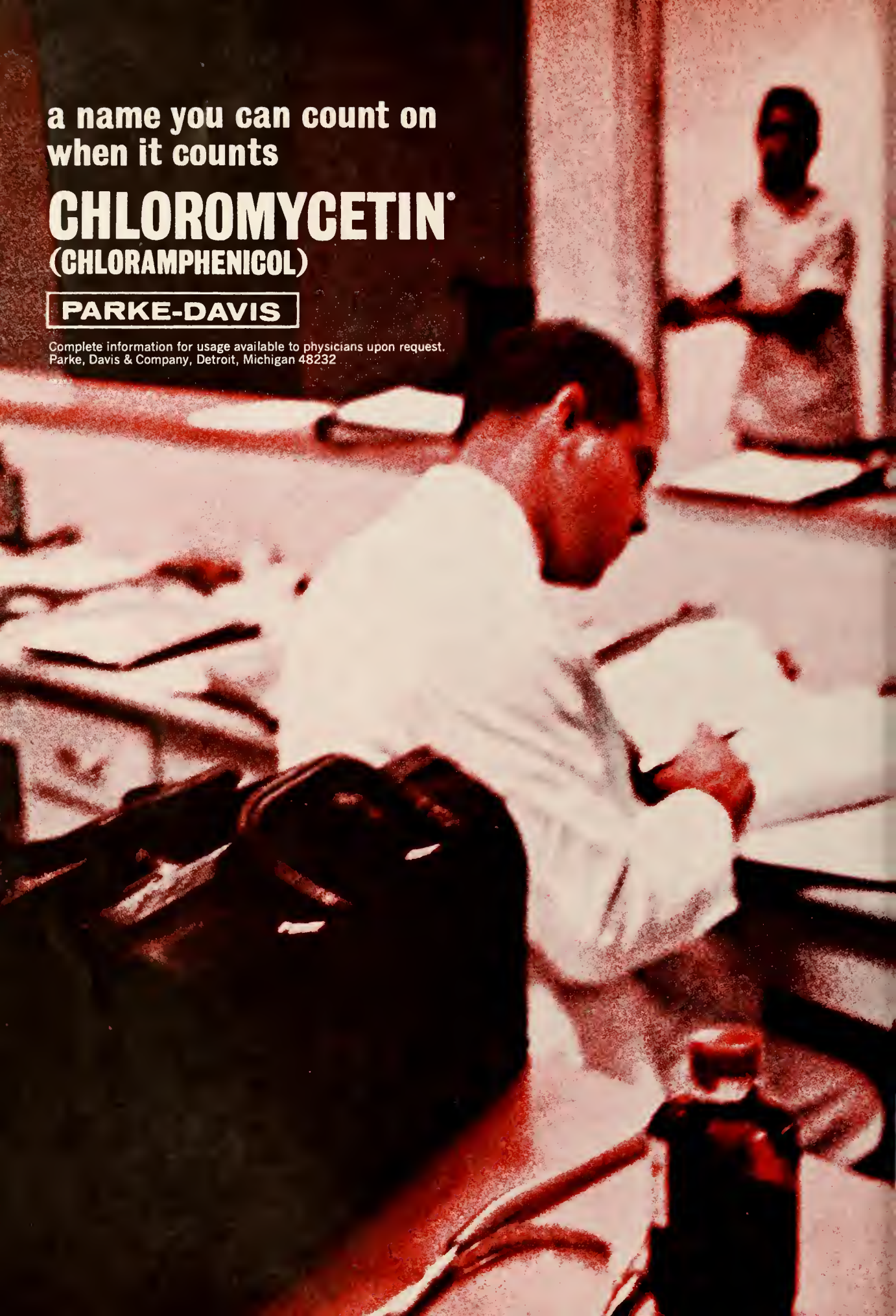
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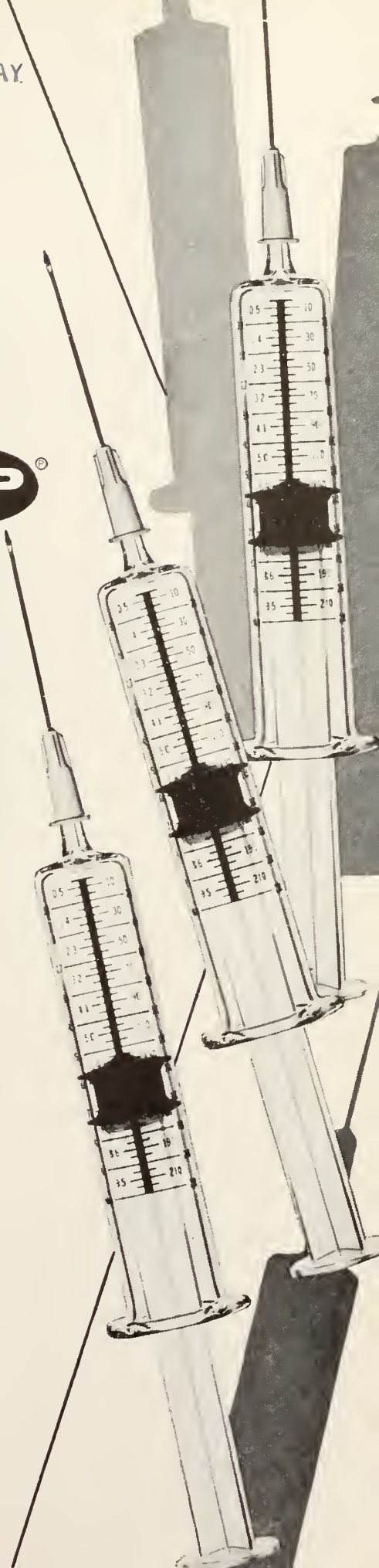
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DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines when the offending organisms are tetracycline-sensitive.

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Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occure. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth— dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg. of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg. every 6 hours for a minimum of 4 doses or 300 mg. every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg. every 6 hours or 300 mg. every 12 hours until a cure is effected.

Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg. in 3 divided doses for six days.

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Of course, as with all thiazides, supplemental dietary potassium should also be considered.

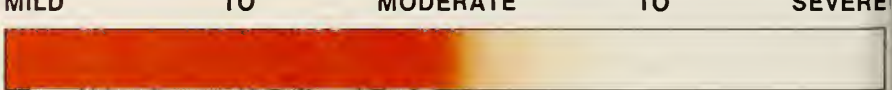
Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

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MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

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Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

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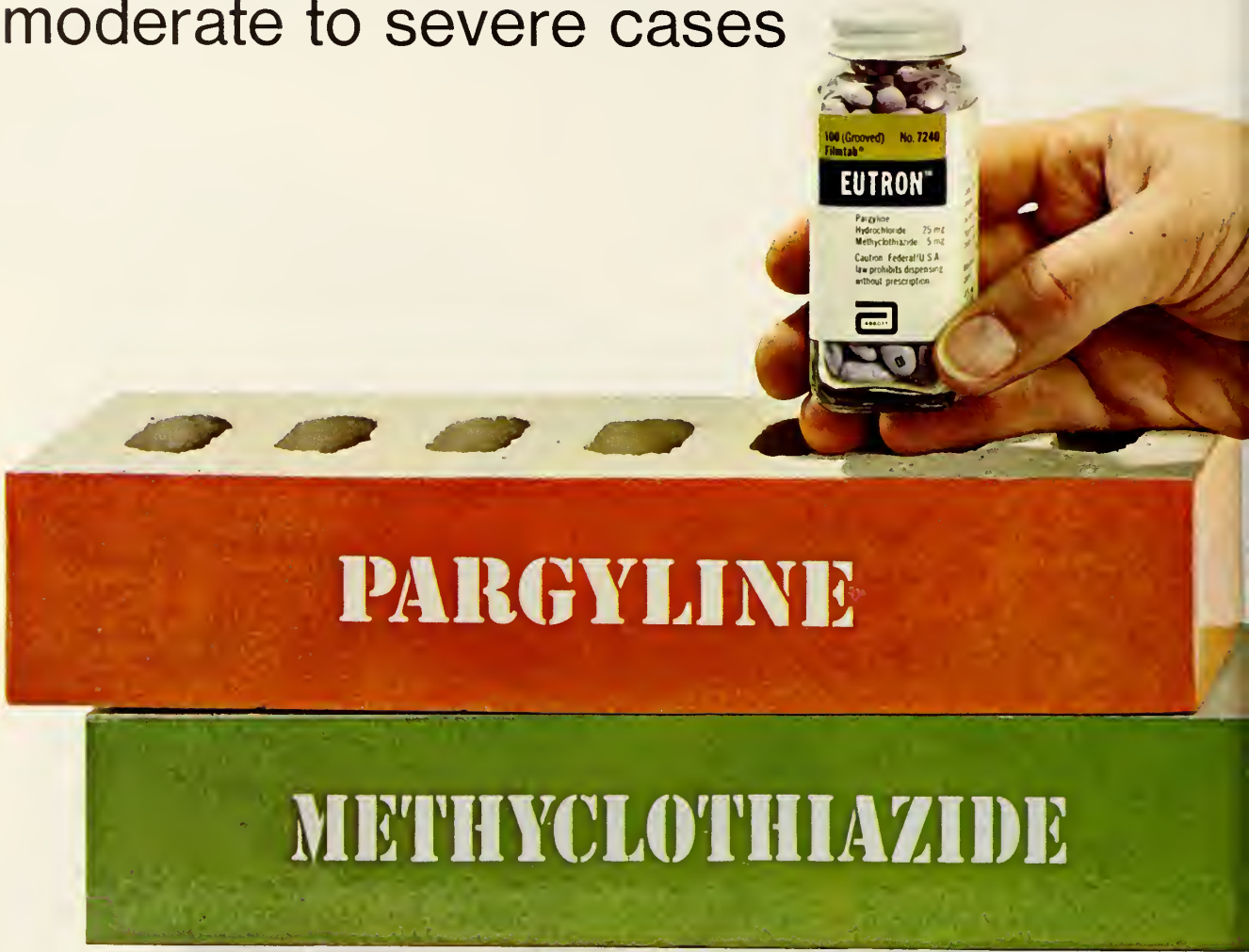
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See Brief Summary on final page of advertisement

801094

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

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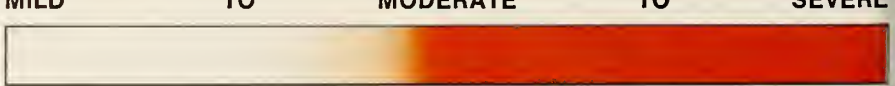
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PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amendable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

TM-TRADEMARK

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅕ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination.

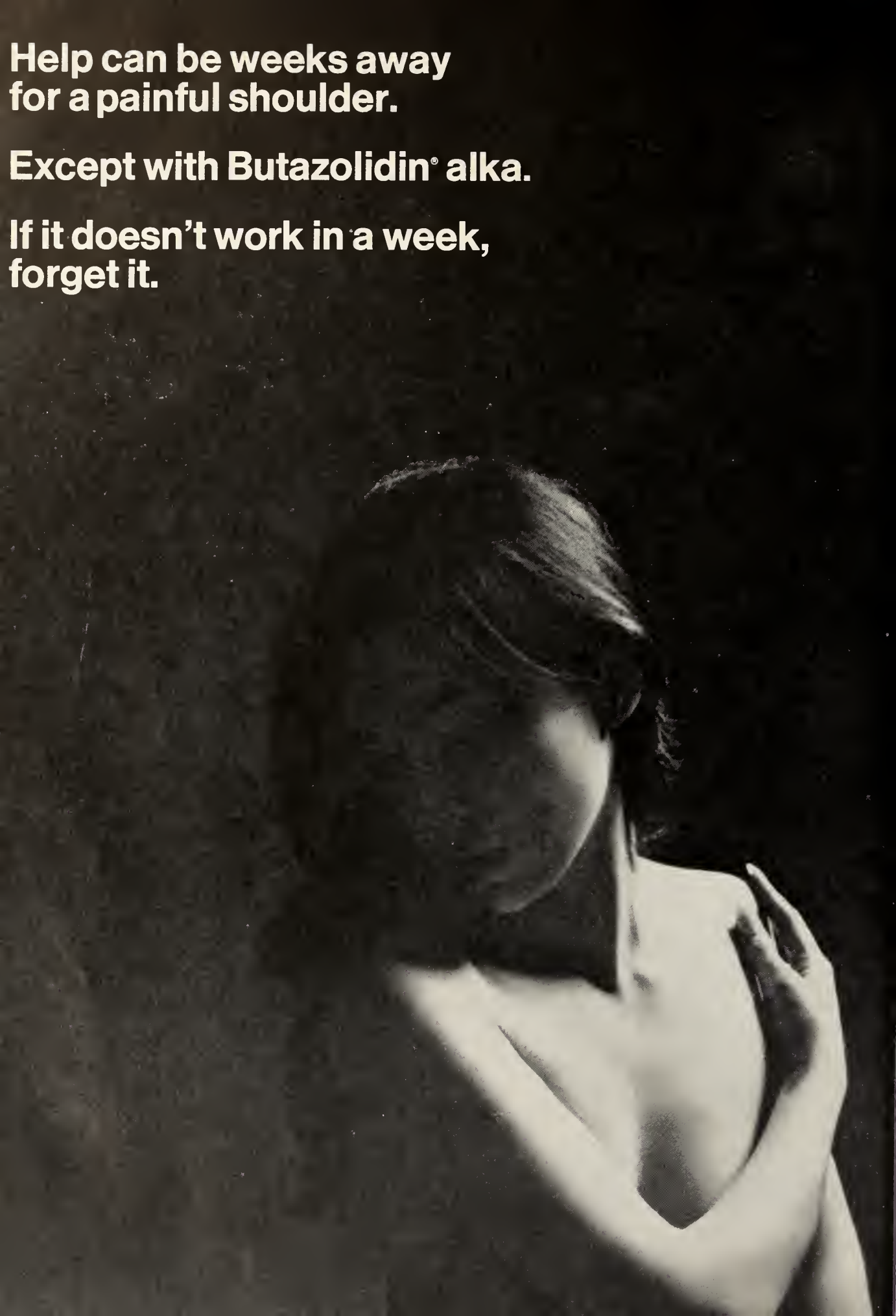
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traindications: Edema; danger of cardiac ompensation; history or symptoms of pep- ulcer; renal, hepatic or cardiac damage; ory of drug allergy; history of blood dys- sia. The drug should not be given when the ent is senile or when other potent drugs are n concurrently. Large doses of Butazolidin are contraindicated in glaucoma.

ning: If coumarin-type anticoagulants are n simultaneously, watch for excessive in- ase in prothrombin time. Instances of re bleeding have occurred. Pyrazole com- nds may potentiate the pharmacologic on of sulfonylurea, sulfonamide-type nts and insulin. Carefully observe patients iving such therapy. Use with great caution he first trimester of pregnancy.

cautions: Before prescribing, carefully ct patients, avoiding those responsive to ine measures as well as contraindicated ents. Obtain a detailed history and a com- e physical and laboratory examination, in- ding a blood count. The patient should not eed recommended dosage, should be ely supervised and should be warned to ontinue the drug and report immediately if r, sore throat, or mouth lesions (symptoms lood dyscrasia); sudden weight gain (water ntion); skin reactions; black or tarry stools ther evidence of intestinal hemorrhage ur. Make regular blood counts. Discontinue drug immediately and institute counter- asures if the white count changes signifi- tly, granulocytes decrease, or immature ns appear. Use greater care in the elderly in hypertensives.

erse Reactions: The most common are sea, edema and drug rash. Swelling of the es or face may be minimized by withhold- dietary salt, reduction in dosage or use of etics. In elderly patients and in those with ertension the drug should be discontinued the appearance of edema. The drug has n associated with peptic ulcer and may re- ivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Painful Shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: one week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily. 6509-V(B)82

Butazolidin® alka Geigy

Capsules

phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

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Division of Geigy Chemical Corporation
Ardsley, New York 10502

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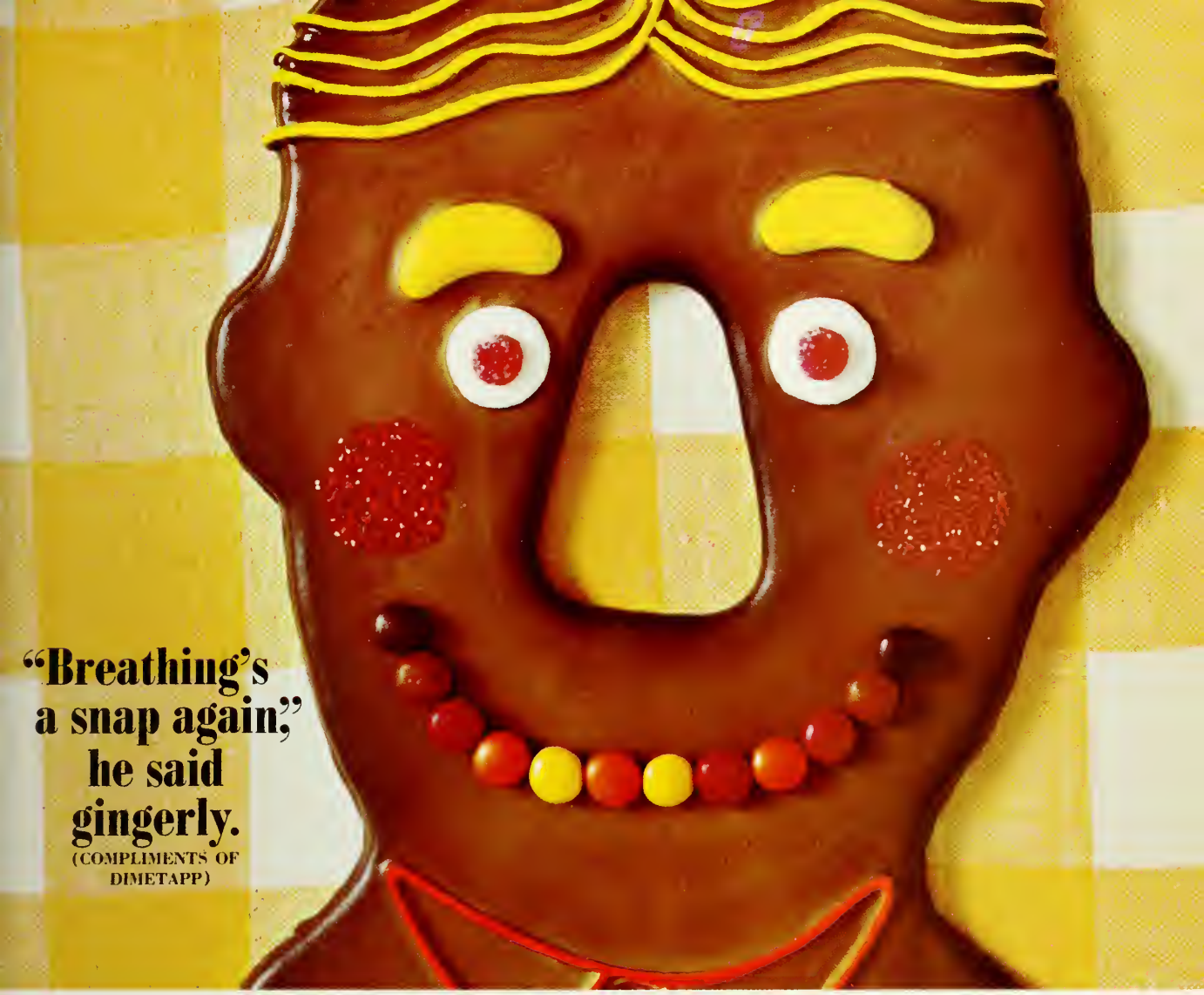
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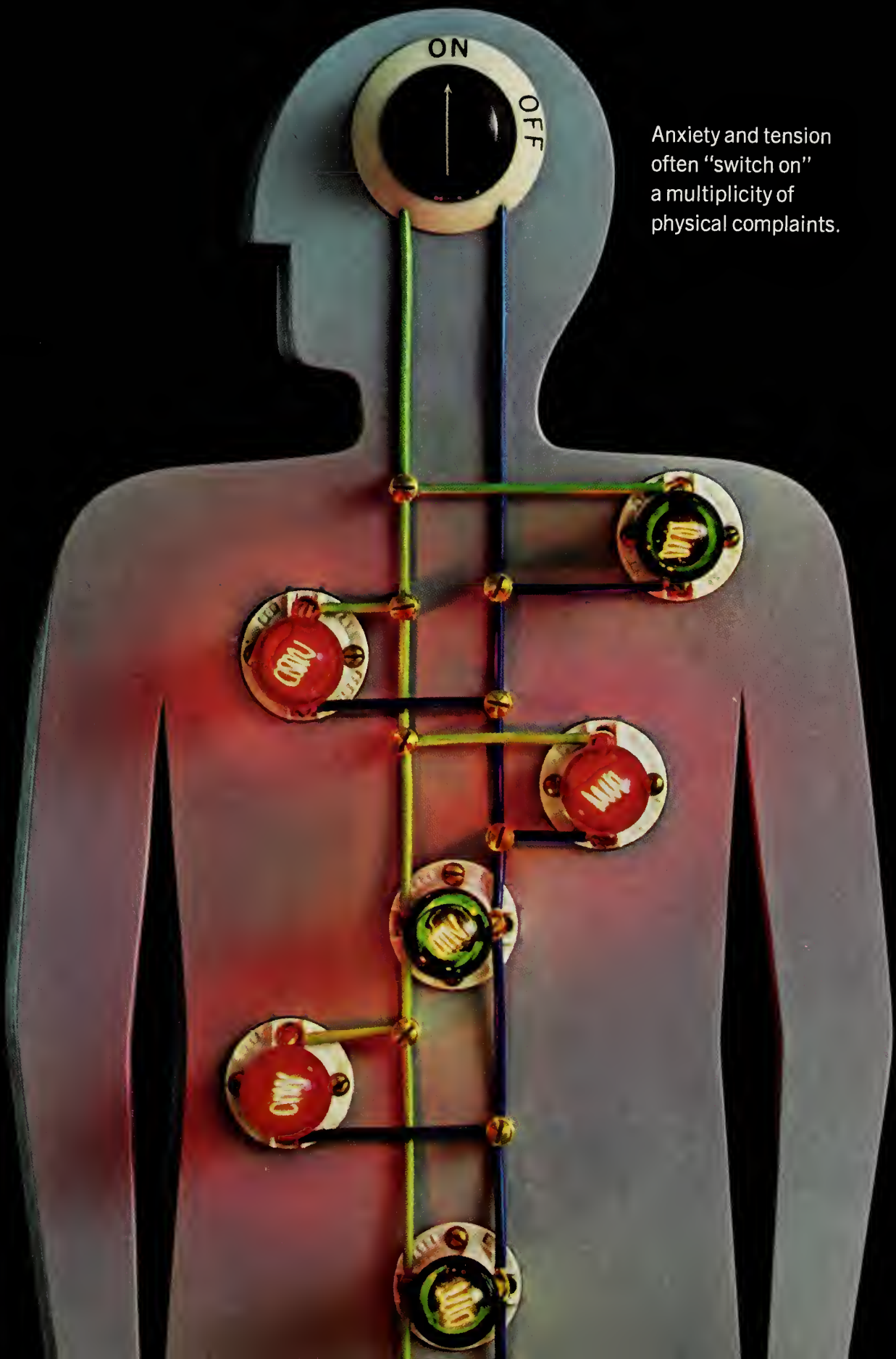
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Contraindications. Tybatran (tybamate) should not be administered to patients known to be hypersensitive to the drug. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings. Simultaneous administration to psychotic patients of tybamate with phenothiazines and other central nervous system depressants has in a few instances been associated with the occurrence of grand mal or petit mal seizures. Seizures have been reported with administration of phenothiazines alone, but not with administration of tybamate alone; nevertheless, tybamate should be used cautiously in individuals who are receiving other central nervous system depressants or have a history of convulsive seizures. Also, it should be borne in mind that simultaneous administration of tybamate with alcohol or with other psychotropic agents, particularly phenothiazines or monoamine oxidase inhibitors, which are known to potentiate the action of other drugs, may result in additive actions.

Precautions. There has been no evidence to date of the development of habituation or addiction. Investigators have not observed excessive self-medication or any withdrawal symptoms with use of Tybatran (tybamate), but the latter should be kept in mind with cessation of the drug after prolonged use. Because of the occurrence of

Prescribing information continued on next page.

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withdrawal symptoms or exacerbation of presenting symptoms upon rapid withdrawal of other agents of this type, abrupt withdrawal of Tybatran (tybamate) should be avoided. Tybamate, like other psychotherapeutic agents, should be used with caution in addiction-prone individuals. Should symptoms of hypersensitivity occur, administration should be discontinued at once and appropriate symptomatic treatment initiated. Operation of motor vehicles or machinery or other activities requiring optimal mental alertness should be avoided if drowsiness or vertigo is present. As with any new drug, Tybatran (tybamate), should be used with caution in patients with a history of drug allergies, blood dyscrasias, and hepatic or renal disease; and prolonged and/or high doses of tybamate should be accompanied by periodic measurements of hepatic, hematopoietic, and renal function.

Adverse reactions. While these have only rarely required discontinuation of the drug, the most frequently encountered reactions have included drowsiness, dizziness, nausea, insomnia, euphoria. The drug was discontinued in one child because of a possible drug-induced urticaria, and skin rash and pruritus have been encountered in a few other patients. In a few patients, effects suggesting excessive stimulation such as hyperactivity, fidgetiness, flushing, and tachycardia have been encountered. Other reported side effects recorded only a few times to date have included ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients to whom tybamate (up to 6000 mg. daily), phenothiazines, and other psychotropic agents were administered simultaneously. Convulsive seizures have not been reported with the use of tybamate alone.

Until clinical experience has accumulated with this drug, inasmuch as tybamate is related to meprobamate, the physician should be cautious about the possibility of rare, serious adverse reactions such as may be encountered with the latter drug. Should excessive doses of tybamate be ingested, it is recommended that any drug remaining in the stomach be removed and symptomatic therapy, including central stimulants, be used as necessary.

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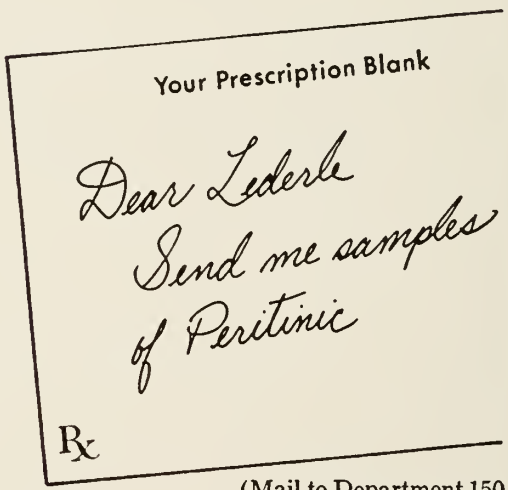
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Tracheostomy or Peroral Endotracheal Intubation?

Loring W. Pratt, M.D.*

In recent years there has been greatly increased interest in emergency procedures for the establishment of adequate airway. Although there was probably as much interest in the past, certain developments have allowed greater flexibility in handling the problem, and improvements in equipment and techniques have permitted refinements previously unknown.

Historically, the establishment of airway by artificial means was probably first accomplished by breathing into the person's mouth or nose in an effort to "breathe for him." Galen reported that an opening of the arteria aspera (the trachea) was performed as early as 124 B.C. by Asclepiades of Prusa.[1] In 1564 there was clear account of one who was reported to have performed tracheostomy (Antonious Musa Brassavola) and thus circumvented the upper airway and saved the life of a patient whose airway was obstructed by a large abscess.[2] Throughout the ensuing years tracheostomy was performed only as an emergency procedure, usually in terminal situations and often as an inadequate terminal gesture.[3] In 1887 O'Dwyer reported on the use of endolaryngeal intubation as a means of treatment in diphtheria.[4] This produced many good results and diverted attention from the use of tracheostomy for a time, but subsequent tracheal and laryngeal stenosis posed a serious problem. In the early 1900's, Chevalier Jackson[5] took up the airway problem and became a staunch advocate of tracheostomy which he standardized, promoted and perfected through the ensuing years. Attention was once more turned to tracheostomy; and, following its use in bulbar polio epidemics,[6] it became apparent that it had many more uses than those originally indicated. As a result of this enlightment, tracheostomy became a more commonly performed procedure, and since 1943 has been done with much greater frequency for secretional hypoxia.[7]

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During these past few years anesthesiology has become a more highly developed art and the use of endotracheal anesthesia has become widespread. A logical extension of the use of endotracheal intubation is the care of the unconscious or injured patient and this technique has been used with considerable success in many clinical situations. The development of new plastic tubes and other refined pieces of equipment has given this procedure a definite place in the care of the patient.

There are, however, definite indications which militate for or against tracheostomy; and definite indications for or against peroral endotracheal intubation. It is with an eye to exploring these indications and providing criteria for their discrimination that this paper is prepared. Such factors include (1) urgency, (2) facility of the operator, (3) anticipated duration of need, (4) physical condition of the neck and upper airway, (5) presence of infection, (6) age of patient, (7) malignant tumors, (8) reduction of dead space, and (9) elective procedure.

Urgency is an indication for either type of airway. The surgeon may be well advised to choose a cricothyroid laryngotomy rather than a low tracheostomy, while the anesthetist will probably select endotracheal intubation. In either instance, the procedure of choice is that which can be accomplished in the shortest time and is dependent upon the particular skills of the individual physician. Either will provide an adequate airway.

Duration of need for airway assistance, in the absence of an urgent situation, is probably the most important single consideration in deciding which procedure to employ. If the anticipated time is forty-eight hours or less, endotracheal intubation is perhaps the procedure of choice. If the need is to be for a longer period of time, tracheostomy is the most desirable type of intervention, as it is chiefly in prolonged intubations that laryngeal damage results. Prolonged pressure from an endotracheal tube may produce ulceration of the vocal cord,[10] the subglottic space and/or the trachea.[8,9] After removal of the

offending foreign body, granulomas may develop and cicatricial stenosis may ensue. Although there are many reports of greatly prolonged periods of intubation without untoward effects,[11] there are also numerous reports of serious complications.[12] Since severe laryngeal damage has been produced by as little as seventy-two hours of intubation, this author feels that in general an arbitrary limit of forty-eight hours is a reasonable guide.

The physical condition of the neck and upper airway may well determine the most desirable procedure. In cases of extensive damage to the face and upper airway, tracheostomy is often the desirable and more simple procedure; whereas a patient with severe damage to the neck (as in a severe burn) might well be handled more effectively with an endotracheal tube.

Infections of the upper airway and larynx are best handled by tracheostomy. Although there are many reports of the efficacy of endotracheal intubation in these situations, there is also an impressive list of complications resulting from intubation of the larynx. The resultant laryngeal stenoses are an undesirable and troublesome complication which may, in most instances, be avoided by the judicious use of tracheostomy.

Secretional hypoxia is one of the important problems which may be well managed by either intubation or by tracheostomy. In most instances it makes little difference which is utilized unless the problem is very severe or likely to be prolonged. When secretions are unusually profuse, tracheostomy is more desirable, due to greater facility in handling secretions via tracheostomy tube as compared to endotracheal tube.

Age of the patient is also a factor in decision as smaller children are harder to manage by endotracheal technique and the anatomically smaller larynx is more likely to be involved by post-intubation edema, ulceration and stenosis. Large children and adults are much better candidates for intubation.[12] Tracheostomy in the infant is often difficult to discontinue but does no violence to the larynx itself.

Laryngeal tumors, especially if malignant, should not be traumatized by the insertion of an endotracheal tube. Any auxiliary airway is most desirably a tracheostomy. Even this should be avoided unless the need is definite, as an increased incidence of stomal recurrence has been noted in laryngectomees who have had preoperative tracheostomy.

Reduction of dead space is helpful in many types of pulmonary embarrassment. There is controversy as to the extent that tracheostomy per se reduces dead space, due to leakage about and above the tracheostomy tube. If such reduction of dead space is of importance, either tube will be effective if the cuffed form is used. The tracheostomy tube will, however, reduce the dead space slightly more than the endotracheal tube.

Elective or semi-urgent problems, in which there is a serious or major underlying disease which will not respond to brief periods of intubation, are best handled by tracheostomy. It is undesirable and unnecessary to traumatize the larynx when a tracheostomy may be done in an orderly fashion and provide prolonged control over the airway for the required time thereafter. However, if the disease is such that marginal difficulty is present and may be relieved by brief intubation, even though the procedure may need to be repeated at intervals over some period of time, it is probably more desirable to resort to intermittent, brief intubations than to perform a tracheostomy which may be permanent.

Discussion

Intubation is a useful temporary procedure by which an adequate airway can be established in an urgent situation so that the patient may be maintained until an orderly tracheostomy is possible. The most orderly of all tracheotomies is performed in the operating room over an endotracheal tube, whereby the airway is secure throughout the surgical procedure.

Advantages Of Tracheostomy

1. Laryngeal trauma is avoided (especially important in infectious diseases.)
2. Easier management (due to cleanability of inner tube).
3. Patient is perfectly manageable out of bed.
4. Readily discontinued.
5. Complications of intubation are avoided.

Advantages Of Peroral Endotracheal Intubation

1. Surgery is avoided.
2. Complications of tracheostomy are avoided.
3. Readily discontinued.
4. Easily reestablished if necessary.

Disadvantages Of Tracheostomy

1. Complications of tracheostomy.
    1. Emphysema
    2. Pneumothorax
    3. Hemorrhage
    4. Crusting
    5. Laryngeal stenosis
    6. Tracheal stenosis

Disadvantages Of Peroral Endotracheal Intubation

1. Cleaning the tube is more difficult than with tracheostomy.
2. Ambulation of the patient is difficult.
3. Complications of intubation.
    1. Damage to larynx from inept manipulation.
    2. Laryngeal granuloma
    3. Laryngeal stenosis
    4. Laryngeal edema
    5. Membranous tracheitis
    6. Crusting
    7. Tracheal ulceration

Conclusions

1. Adequate airway may be provided by either tracheostomy or by peroral endotracheal intubation.

2. For brief periods of time, endotracheal intubation is most desirable.

3. Prolonged peroral intubation (more than forty-eight hours) should in general be avoided.

4. Tracheostomy may be utilized for as long as necessary without consequent laryngeal injury.

5. Better airway, in cases of profuse secretion, may be obtained by means of tracheostomy.

6. Laryngeal tumors and infections should be circumvented by tracheostomy.

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Heart Beat News Release

Psychogenic Pain

Cor DeHart, M.D.*

Introduction

There are people who seem to experience pain with unusual intensity and frequency and often they suffer pain without any peripheral damaging process. Frequently treatment does not alleviate the pain, thus psychological factors seem to play the main role in the causation of their pain.

Pain As A Mind-Body Problem

On one hand pain has the characteristic of a sensation, having its origin in a stimulus. It may appear as a result of a lesion to the cells of the body when sensitive fibres are pathologically stimulated. On the other hand, pain also has the character of a feeling in its deep effects and then pain is an object of consciousness. What is painful or unpleasant in pain is a basic element of consciousness differing from any other feature of pain. We can distinguish then between pain sensations, a state of mind, and suffering from pain. The latter is less transitory, which means that it does not pass as quickly as the former and cannot be pushed aside. Pain in this sense is considered in relation to problems of general biology, the study of emotions and will, voluntary motor systems, conditions of life, and to personality.

There appears to be a discrepancy between pain and injury or the seriousness of danger. Because of this discrepancy we have to rely on experience in judging the symptomatic importance of pain. Experience, not the intensity of pain, determines the diagnosis. Certain types of pain are associated with certain illnesses. Also sensitivity to pain decreases according to the reaction to pain and the attitude towards the feeling of changes in pain. A person, as it were, learns to bear pain. Pain depends on a personal attitude to ones body; pain depends more on the emotional state than on the intensity of a stimulus.

The essential quality of pain, like all original personal experiences, can only be known immediately in the course of human existence. This means, that pain appears always in a certain context, that it determines the significance of the subjective experiences, depending on past personal experience and values. What matters is, the meaning given to the bodily sensations and the influence that anticipation and anxiety have on them. In this context pain can mean, as was described by Szasz,[1] a signal of danger to the body or a request for help from another person. Or the pain may not refer to the body at all, but simply signify the request for help, a complaint about unfair treatment, or a demand for punishment.

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Some Basic Behavioral Adaptational Concepts

Pain, anxiety and fear are the key safety mechanisms for the ego. Pain is probably the most basic of the protective mechanisms, protecting directly the body of an infant. The expressive response to pain is most likely a vocal communication, to cry. Later on in development or perhaps simultaneously, anxiety develops. Anxiety and pain in infancy are close to one another and often times indistinguishable. In the early stages of development, we may have observed pain, anxiety and fear as well as frequently, rage, are difficult to separate in the child and the emotionally disturbed person. At times there appears to be a fluid transition between those protective devices, making it difficult for the observer to know exactly with what he has to deal. Much of behavior is regulated by what Rado[2] calls Hedonic self regulation, that is to say we seek pleasure and avoid pain. To understand further adaptational behavior patterns of pain we have to take a look at some developmental struggles especially the struggles between child and mother. The child wishes to have his own way, this, however, he cannot have and the child becomes disobedient and defiant with resultant punishment and possibility of atonement. Gradually he learns to anticipate his parents behavior. The result is that parental criticism sets the pattern for self criticism. Parental punishment sets the pattern for self punishment. Parental reward sets the pattern for self reward and confidence. When these mechanisms are repeated over and over again most of these anticipations become automatic. The parents set up in the child a conscience. Wrong-doings are punished by conscience. One of the ways of punishment is by suffering pain.

The dynamics just described constitute the fearful or submissive form of moral pain dependence. This disorder, according to Rado, belongs to the pathology of conscience. The patient is forced to maintain his emotional security, his self respect, by a self sacrificing way of life, turning himself often enough into a martyr.

Many of the patients we see complaining of severe striated muscle tension backache, muscle tension headache, migraine, cardiospasm or many other chronic pains, suffer from pain associated with punishment. They may imagine, hallucinate, aggravate or exaggerate pain as a means of self punishment to diminish guilty feelings. Many painful syndromes are associated with psychological conflicts.

Psychiatric Diagnosis

1. Psychogenic pain is not symptomatic of a specific psychiatric illness; it is frequently seen in psychoneurotic depressive states. The pain masks an underlying de-

pression, sometimes it is difficult to decide if the patient is depressed because of the pain, but further attentive observation will usually make clear that the experience of pain serves to expiate guilt. Frequently the pain protects the patient from more intensive depression and suicide.

2. Pain is frequently a part of the hypochondriacal syndrome. All his life this patient may complain about pain; he is a chronic complainer whose emotional life is invested mainly in his body organs and body feelings. He has, as it were, retreated himself into his body. His body becomes his utmost concern and his main preoccupation. The pain is a substitute for interpersonal relationships. This patient complains constantly, but seems to have no real expectation of getting rid of the pain. He comes to the office and from beginning to end will tell his litany of pain, complaining frequently that no treatment has ever helped. He makes the doctor feel unimportant and incompetent and as such often times provokes angry feelings in the examining physician. Underneath this patient has feelings of unworthiness or of guilt. He constantly wants to punish himself and frequently he feels better by punishment.

Case Reports

Case 1 – A 45-year-old housewife who has just married for the third time, had suffered from muscle tension headache and backache for many years and at various times in her life she had severe pains in her abdomen and her legs. She mentions that she has suffered indescribeable pains, especially during the last half year since she has married her present husband, whom she described as exceptionally kind and good. Previously her husbands all had been alcoholics and were constantly fighting with her. Now she mentions that she could not have a better husband but that her pain in her back and head just prevent her from enjoying the relationship with her husband. She describes in an ostentatious way the amount of suffering and pain. She says that she has undergone many medical examinations and had been to many doctors without relief.

In passing I might say that in this patient the pain exaggerated when things began to go well. This person seems to have an intense need to suffer. This woman was relatively free of pain as long as external difficulties made life difficult. When the environment does not treat her "tough" enough it seems as if she needs to inflict pain on herself.

Case 2 – A 48-year-old school teacher complains of intolerable pain under his arm because of "boils" that are pressing on the nerves and bones of the armpits. He mentions that sleeping pills will help the pain and that he cannot stand the persistent nature of the pain and threatens the examiner that if he does not give him medication right away he will sue for maltreatment. The physical examination did not show any boils or infection. He mentions that other physicians were responsible for his pain and that he is about to sue some other physicians as well.

In the psychotic patient the pain represents a delusion; he may feel persecuted by pain and desperately looks for help from different physicians. Frequently little further observations will be needed to establish the diagnosis. The bizarre descriptions make the delusional qualities evident.

Conclusions

Psychogenic pain may be a symptom representing a solution of an emotional conflict. Frequently these conflicts are outside the patients awareness and involve problems of conscience. Pain then is seen as an expiatory procedure which in time may become completely automatic. The patient who uses pain as self punishment, may then become totally unaware of its meaning. These patients welcome pain if it means expiation, forgiveness and atonement. Pain in this sense is a relief of guilt and reunion with a loved one, real or imaginative. Frequently these patients are caught in a pattern of infantile dependency on relatives, friends or physicians. They demand constant care.

Summary

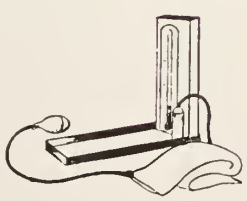
We may say that a patient suffers psychogenic pain when:

1. There is no peripheral damage to account for the pain.
2. There is no relief from pain medication.
3. There is no, or a very minimal, physical sign or symptom to account for the pain.
4. There is unusually long history of pain experience, frequently of a bizarre nature.
5. There is an increase in pain when the external environmental conditions improve.
6. There are strict punishing parents in the family history who may have contributed to pathology of conscience giving life to relief of guilt feelings by self punishment by a form of pain.

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Adverse Drug Reaction: Chills and Fever Due to Procainamide

Richard R. Dole, M.D.

Chills and fever as a reaction to procainamide therapy is stated to be a rare occurrence! Nine previous case reports have appeared in the literature since 1951. Lack of awareness of this entity may lead to unnecessary hospitalization and morbidity. Recent experience with such a case is reported.

Case Report

A 74-year-old diabetic widow was admitted to the hospital on August 19, 1967, because of weakness and fever of 1 to 2 days duration. There was associated malaise and anorexia with occasional nausea and vomiting. She had previously been hospitalized from August 2 to 15, 1967 by another physician for acute myocardial infarction. She had been taking procainamide 250 mg. 3 times daily since Auguest 7, 1967. A past history of cholelithiasis was obtained.

The admission physical examination disclosed an acutely ill, mildly obese elderly woman. Her oral temperature was 103. Her skin was cool and clammy. There was no eruption and no adenopathy. Her lungs were clear. No cardiac enlargement, arrhythmia or murmur was detected. Her abdomen was nontender with no palpable organs or masses. There was no edema.

The admission hemoglobin was 12.5 gm.%; hematocrit 38% compared to 15.2 gm.% and 46% respectively 2 weeks previously. The WBC was 11,800 with 78% segmented neutrophiles, 8% band forms and 15% lymphocytes.

The initial urinalysis showed 20-25 WBCs per hpf but a urine culture was sterile; FBS 160 mg.%, BUN 22.5 mg.%, SGOT 149, LDH 635. Bilirubin, total 1.0 mg.%, direct 0.4 mg.%, indirect 0.6 mg.%. The serum sodium was 130 m Eq/L. but the remainder of the electrolytes were within normal range. Five blood cultures yielded no growth. Three stools were negative for occult blood. An L.E. prep and an antinuclear antibody test were negative. The chest x-ray was normal. The EKG showed "anterolateral ischemia" with no change from August 14, 1967.

Initially the patient was continued on her medications: digitalis and procainamide. After blood cultures were obtained, antibiotic therapy with cephalothin (Keflin®) was begun on the second hospital day and kanamycin (Kantrex®) was added on the third hospital day. The patient remained acutely ill, however, with shaking chills and fever spiking to as high as 104.8° accompanied by episodes of nausea and vomiting. On the fifth hospital day, the appearance of a blotchy erythema of the face suggested the possibility of a drug reaction. Procainamide was discontinued. The temperature became normal in less than 24 hours and remained so, accompanied by rapid symptomatic improvement. On the 10th hospital day, a 250 mg. test dose of procainamide was given. This was followed within 6-8 hours by a shaking chill, vomiting and fever to 103°. By the following day, her temperature was again normal.

During the course of her illness, her hemoglobin dropped to a low of 9.9 gm.%, Hct. 32%. The reticulocyte count was not elevated (1.1%), stools were negative for occult blood and the serum iron was within normal limits (140 mcg.%). The patient was discharged on the 20th hospital day and has remained well since. Her hematocrit has gradually risen to normal range.

Discussion

As suggested by Hey, et al, whose three reported cases all occurred during a five week period, the incidence of procainamide fever is likely much higher than the number of reported cases would imply. It should be considered whenever any patient on the drug develops fever. The interval from starting of medication to onset of symptoms has usually approximated 2 weeks in the unsensitized patient. The present case became symptomatic in 10-11 days. The chills are characteristically shaking; the fever is mostly remittent. Anorexia, nausea and vomiting, joint pains, headache and malaise are common. The spleen frequently becomes palpable. The white blood count is usually normal or slightly elevated. Eosinophilia has occurred in only two of the reported cases. In King and Blounts' case,[2] transient hepatic swelling was associated with elevation of SGOT and LDH. Although no liver or spleen was palpable in this case, the enzymes were likewise elevated, indicating hepatocellular injury. Hey, et al, reported a 2 gram drop in hemoglobin in one case but a drop of the magnitude of this patient (5gm.) has not previously been noted. Insufficient data are available to establish the mechanism of anemia.

This chill-fever reaction to procainamide should not be confused with the more frequently described Lupus-like syndrome which occurs usually in patients on chronic long-term treatment, is of more gradual onset and is associated with significant titers of serum antinuclear factors and a high incidence of positive LE cell tests. According to Fakkro, et al,[8] a lupus-like syndrome may occur in as many as 30% of those chronically taking this drug. Other uncommon adverse reactions reported to occur with procainamide therapy include agranulocytosis,[9] thrombocytopenic purpura[10] and skin eruption.[11,5]

Summary

A case of chills and fever due to procainamide therapy is reported and compared with similar cases previously described. Characteristically, this type reaction occurs within 2 weeks after initiation of therapy and subsides within 24 to 48 hours after therapy is discontinued. It is frequently accompanied by malaise, anorexia, nausea and vomiting, arthralgia and headache. Skin rash, hepatosplenomegaly, eosinophilia, elevated SGOT and LDH and anemia may occur. The fever is of the remittent type and is readily provoked within a few hours by a test dose in a previously sensitized subject.

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Epistaxis is not Just a Nosebleed

Richard T. Chamberlin, M.D.

Epistaxis has long been a thorn in the side of the otolaryngologist. In spite of the many exciting advances in medical knowledge the understanding and treatment of this common problem is still lacking.[1] A particularly important aspect of epistaxis is frequently neglected, that is, its significance as a sign of serious underlying disease processes. The purpose of this report is to document this fact with a brief case report as it occurred in the experience of a typical community hospital.

Case Report

A thirty-two-year-old white tanning factory worker was admitted to the Thayer Hospital on December 4, 1966 with a chief complaint of a nosebleed which had been recurring for seven to ten days. His previous medical history was noncontributory. The physical examination revealed pallor, general weakness, a blood pressure of 220/130, and there was a Grade III hypertensive change in the vessels of the optic fundi. The initial hemogram revealed a hemoglobin of 9.0 gm. per cent, and a hematrocrit of 26%. He was given sedation and analgesics as the bleeding was controlled with a posterior nasal pack. It was then noted that his blood pressure remained at average levels of 210/120 and the initial urinalysis showed proteinuria. A blood urea nitrogen was found to be 100 mg.%. Subsequent medical consultation established a diagnosis of chronic azotemia and hypertensive cardiovascular disease secondary to chronic glomerulonephritis. Even careful retrospective history failed to elicit any overlooked or ignored symptomatology prior to the onset of the epistaxis.

Comment

The exact incidence of epistaxis is probably unknown because of the obvious fact that not all patients require any more than simple treatment at home. It is also, therefore, impossible to determine the correct incidence of all systemic disease originally presenting as a nosebleed.

Hara reviewed 1,404 cases of epistaxis which were hospitalized in a ten year period in Los Angeles.[2] The causes of spontaneous epistaxis in his series included primary traumatic 13.5%, acute and chronic nasal infection 14.0%, vascular abnormalities 47.5%, defective coagulation 7.4%, hematopoietic diseases 3.8%, cardiac disorders 2.4%, endocrine imbalance 1.8%, malignancy of the nose 0.7%, and unclassified 10.7%. In another study Pierce and Chasin found the following medical conditions in 132 patients admitted with severe epistaxis: Persistently elevated blood pressure 37%, Arteriosclerotic Heart Disease 24%, Diabetes Mellitus 11%, Hepatic Disease 9.8%, Chronic Renal Disease 5%, Pulmonary Emphysema 3.8%, and Blood Dyscrasias 3.8%.[3]

In the latter study it is even more important to note that over 50% of their 132 patients had one or more of the above diagnoses and that the majority of these patients did not know of these other diagnoses upon admission. The diagnoses were made only after careful evaluation.

During the year in which the above case was discovered, thirty-three patients were admitted thirty-five times to Thayer Hospital for treatment of epistaxis. Eighteen of these patients had a history of recurrent epistaxis in almost any time period from a few days to as long as several years previously. Fourteen patients had previously known and listed associated diagnoses. Of the group of thirty-three patients only three were found to have potentially serious systemic disease of which they were not aware. The above case is one of those three. It was noted that several cases were released from the hospital having had persistently elevated blood pressures, but it was impossible to tell in retrospective review the extent of follow-up of these cases.

It is well known that many chronic medical conditions manifest themselves so insidiously as to have progressed amazingly far with serious consequences prior to being discovered in some seemingly accidental way. Epistaxis may be the indicator of just such a state and should be attended by thorough evaluation.

Summary

This brief communication is meant to be a reminder of the importance of epistaxis as a possible presenting complaint of many serious underlying systemic conditions. Thorough medical evaluation is indicated, particularly in cases of recurrent epistaxis or in those of enough severity to warrant hospitalization.

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Reflections on Reaching the Age of Fifty

Paul H. Pfeiffer, M.D.

As one approaches the "golden" years there is a tendency to look backward at bygone times and compare them to the present. Those of us who interned at the Boston City Hospital before 1945 will never forget the indoctrination by fire. We were knights in white armor jousting for survival. On duty every other night, we often averaged 4 hours of sleep out of 24 for weeks on end and fought fatigue. We fought to outsmart the other internes and residents and be first to make the brilliant diagnosis. We fought the politicians who wanted to load up the service with "crocks" – especially near election time. We fought the patients who wanted to stay around after they had ceased to be interesting. We fought the relatives of patients for the autopsy permit that would put our services' "post average" above that of our rival. It was a grand and glorious melee fought by humans versus humans and I am saddened a bit to see the machine and the technician taking over as technological advances increasingly dehumanize the practice of medicine.

In those long-gone days internes worked for room, board and laundry so junior house officers did most of the laboratory tests (since technicians cost money). They learned to respect the limitations of the laboratory and to rely more on the historical and physical findings. There was a strong do-for-patient attitude unsullied by considerations of fee for service.

All this is rapidly giving way to new techniques in medicine. Paramedical personnel are sprouting up on all sides and relieving the over-burdened physician of tasks for which he has no time. Medicine is now much more "complex" than it used to be. With multiphasics burgeoning forth the patient supplies the history while the x-ray and laboratory complete the diagnostic evaluation. The M.D. will soon be a replaceable computer in a white coat serving to digest the accumulated material; and, after due ponderation, will call in a surgeon, a psychiatrist, physiatrist, a social worker and so forth, or else prescribe one of those pretty new multiple dose capsules to relieve the patient of his symptoms.

Is medicine really so much more complex today than it used to be twenty or thirty years ago? Certainly the medical students are being taught many things which we who graduated in the early 40's or earlier never heard about. No doubt there are old-timers like myself who would have difficulty defining the 17-Hydroxylase Deficiency Syndrome and would be vague about how to handle Macroamylasemia or Hemoglobin variations in D-Trisomy Syndrome. On the other hand does it require more or less native ability when faced with a case of pneumonia to stain, culture and identify the specific organism and apply a specific anti-pneumococcal serum or to let the laboratory do a sensitivity and determine which antibiotic is indicated. Does it require more or less ability to identify a brain tumor after doing a careful neurological examination or by letting the EEG and brain scan make the diagnosis?

It is no longer fashionable to use the eponyms which once covered our ignorance. For example in pulmonary disease we are much more sophisticated in our analyses and diagnoses than we used to be. The therapeutic choices remain few, however. A positive PAP means surgery, x-ray or an antimetabolic agent. Acid-fast organisms call for INH and related compounds with or without surgery. Ordinary bacteria respond to the appropriate antibiotic, fungi also. And finally when all the above have been ruled out the patient does or does not respond to corticosteroids. Must one really have a head crammed with an intimate knowledge of the functions of the Golgi body and be adept at synthesizing DNA in order to make an intelligent clinical judgement? The medical schools seem to think students must know all the new scientific discoveries. At the same time trained technicians, for example in pulmonary physiology, familiar with blood gases are becoming available to apply suitable ventilation techniques to the distressed "lungers" under the careful supervision (sic) of the physician. Doubtless there will be similarly trained technicians in other fields.

In other words, as medicine "advances" the scientific aspects are being taken over by the technicians. The physician (be he called family physician, primary physician, general practitioner, pediatrician or internist) is more and more of a father-mother or priest figure who, by his calm and friendly presence, offers reassurance to the distressed. A most perceptive internist told me recently that he no longer "got his kicks" from making a clever diagnosis. His satisfaction in medicine derived rather from acquiring an intimate knowledge of the patient as a human being. As the song puts it, "Getting to know you." Is this art or is this science?

The question is worthy of serious examination. It may relate to some of the problems involved in what is currently known as the Crisis of Medicine. The medical schools seem to be fighting a losing battle when it comes to supplying practitioners. As they turn out more highly trained scientists a smaller and smaller percentage of M.D.'s remain in the practice of medicine face to face with sick people. We all know of instances where fine, bright boys and girls with strong characters inspiring confidence have been turned down by the medical schools because of an academic weakness in physics, higher mathematics or chemistry. It is possible that these are just the kind of people who might enjoy the

practice of medicine. One wonders at times how often the physician setting the Colle's fracture or giving blood to a G. I. bleeder worries about the state of the mitochondria.

The public would like to see more M.D.'s out in the small towns or in the unpleasant neighborhoods of the large cities; but is someone who has studied the angiotensinase level going to be happy taking care of sick persons who seventy-five percent or more of the time have a prosaic psycho-somatic illness? Emphasis on the "scientific" aspects of medicine as opposed to the "artistic" conceivably helps to elevate the status of the technical (surgical) fields at the expense of the family doctor who is fast disappearing from the scene – much to the consternation of the public. Eventually it may be necessary to set up a Doctor Corps giving special privileges to young M.D.'s who will practice two years or so in an undesirable locale.

Insurance companies do not help alleviate the shortage of the non-technical M.D.'s. By paying-out much larger sums for a technical procedure (an operation) than for a non-technical procedure (a history and physical) they may be helping to perpetuate the shortage of primary physicians. And why should M.D.'s develop a passion for preventive medicine in our materialistic society, when an operation, even if not indicated, is payed for by insurance at 10 to 20 to 30 times the rate that is payed for a careful history and physical? Not only that but the enchantment with technology, which may be partly responsible for the surfeit of general surgeons has two other effects. 1) Paradoxically an excess of surgeons in a community results in higher charges for operations since each surgeon does fewer than he is capable of and presumably charges more for each one. 2) Surgeons, with free time out of the operating room, downgrade the medical history and physical by doing them superficially for a nominal sum.

The hospitals are eagerly acquiring the expensive machinery which threatens to remove the human factor in medical care. One envisions in the not too distant future the patient arriving at the hospital, his symptoms all checked off on a special form to be processed by machine, placed on an assembly line and passed through a battery of x-ray and laboratory tests with the M.D. waiting at the end to see the diagnosis so that he can place it in a computer which matches diagnosis to therapy.

And in the meantime the M.D. having lost the scientific thrills of medicine by way of technical advances and receiving little encouragement to practice his art is being stripped of his charitable instincts by public demand to make Medicare or Medicaide available to all.

Many solutions to the rapidly developing shortage of practicing M.D.'s are being proposed. Somewhat belatedly attempts are being made to graduate more students in medicine. This may or may not help depending on the proclivity of graduates to actually practice medicine. It has been suggested that teams of internists-pediatricians and nurse-practioners be scattered about the land as the primary source of medical care. The difficulty with this is that there are already serious shortages in the fields of internal medicine and pediatrics – possibly related to diminutive financial and technological rewards. The shortage of nurses is already at the critical point; and here also financial and scientific satisfaction may play a role. The numerous planning groups for family practice show great determination and energy but may well meet with the meagre success they have met in the past. Group practice is being advocated as the panacea for the ills of medicine. Groups that are not prepaid must put the surgical staff under pressure to perform lucrative operations; while those that are prepaid often develop jealousies among the members who may feel they are working harder and getting paid less than someone else.

In the United States one even begins to wonder whether the public is getting its money's worth for medical expenses. We spend a higher percentage of the national income on medical care than any other land and yet rank twenty-first among the nations of the world in life expectancy for ten-year-old males. Doubtless there are social habits and customs related to affluence which are involved here, but when one reads of the tremendous rise in iatrogenic diseases one wonders. There are many countries shipping doctors to the United States. Could it be that this does not hurt them as much as it seems to at first glance? Can it be that we already have too many M.D.'s of the wrong kind and would be better off with fewer of the type really concerned with doing a good job in practice?

In conclusion, looking back over the developments of the last twenty-five years in the United States in the medical sphere, one detects an infatuation with science and technology. The art of medicine and human relationships between doctor, nurse and patient are being sadly neglected. Perhaps if the medical and nursing schools accepted fewer scientific geniuses and more people primarily motivated by a desire to help unfortunate human beings in distress, some of the crisis of medicine might be alleviated. Science and technology do great things but, unfortunately, we must remember that every new invention or scientific advance has its price tag of adverse side-effects. Perhaps a slight retreat from the scientific in favor of the artistic and humanitarian (personal as opposed to governmental) aspects of medical care is now in order.

Before we, as M.D.'s, despair it might be well to restore our morale by recalling the words of Robert Louis Stevenson, "There are men and classes of men that stand above the common herd; the soldier, the sailor and the shepherd not infrequently; the artist rarely, rarlier still, the clergyman: the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that shape of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has,

such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what is more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sickroom, and, often enough, though not so often as he wishes, brings healing."

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*It should be pointed out that results obtained in an experimental study of this nature may not necessarily be directly extrapolated to the clinical situation as it pertains to man.

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INDICATIONS: Include streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **CONTRAINDICATIONS AND PRECAUTIONS:** Not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including darkfield examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

References: 1. Isenberg, H. D.: Clinical Evaluation of Laboratory Guidance to Antibiotic Therapy; Health Laboratory Science (July) 1967. 2. Saslaw, S., Carlisle, H. N.: Studies on Therapy of Staphylococcal Infections in Monkeys. 1. Comparison of Cloxacillin, Triacetyloleandomycin and Erythromycin. Proc. Soc. Exp. Biol. & Med.: Vol. 125, No. 4 (Aug.-Sept.) 1967.

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TABLETS / LIQUID

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . . 2.5 mg.
(Warning: may be habit forming)
atropine sulfate . . . . . 0.025 mg.

Halts Diarrhea Promptly

in children with . . . Gastroenteritis ▪ Spastic bowel
Influenza-like infections ▪ Antibiotic-induced diarrhea

Lomotil helps get children with diarrhea off toast and tea and back to normal diets and normal activity with gratifying dispatch. ▪ Lomotil lowers intestinal motility and permits absorption of excess fluid. This usually controls diarrhea promptly. ▪ Moreover, lowered intestinal motility achieved with Lomotil often relieves the abdominal cramps and discomfort so distressing to children.

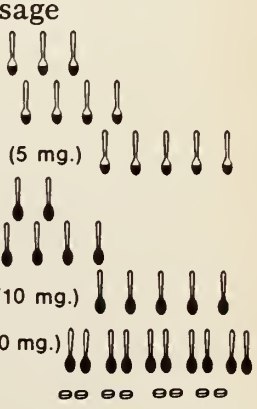
Precautions: Lomotil is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is recommended. Lomotil should be used with caution in patients with impaired liver function or those taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of the extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . .½ tsp.* t.i.d. (3 mg.)
6-12 mo. .½ tsp. q.i.d. (4 mg.)
1-2 yr. . . .½ tsp. 5 times daily (5 mg.)
2-5 yr. . . .1 tsp. t.i.d. (6 mg.)
5-8 yr. . . .1 tsp. q.i.d. (8 mg.)
8-12 yr. . .1 tsp. 5 times daily (10 mg.)
Adults: . .2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.



*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

SEARLE *Research in the Service of Medicine*

When the agitated businessman goes to work...

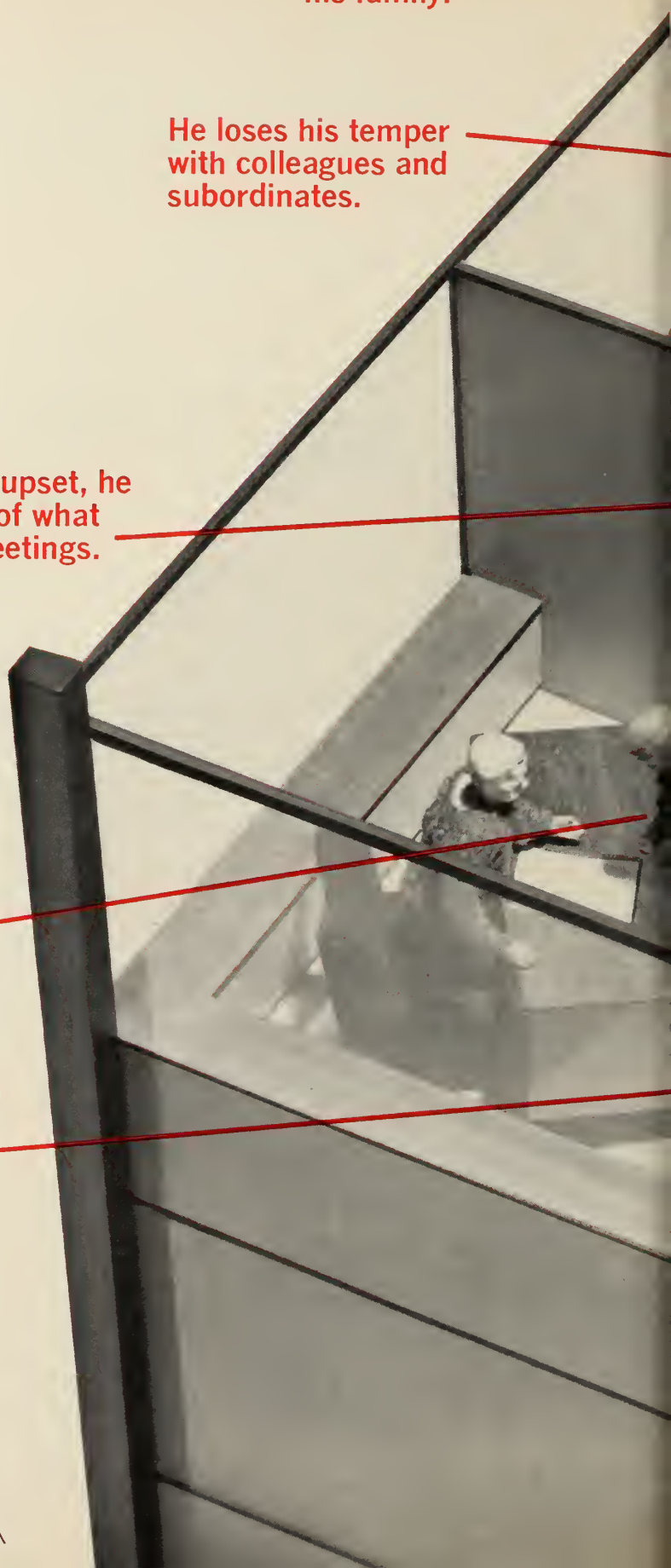
He goes home at night and takes it out on his family.

He loses his temper with colleagues and subordinates.

Emotionally upset, he misses half of what is said at meetings.

He is always fearful about his standing with the boss.

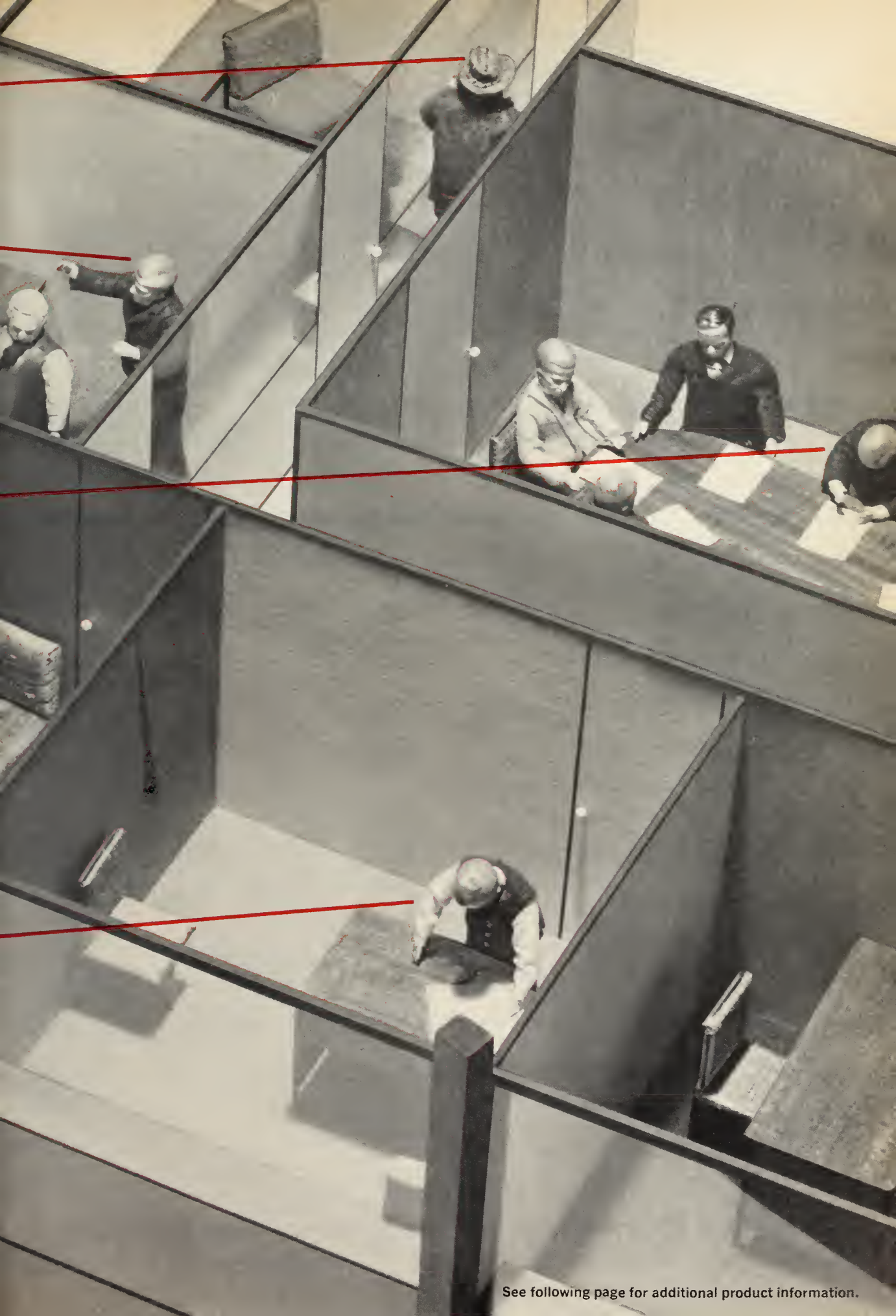
He just can't seem to settle down to his work.



for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ



See following page for additional product information.

When the agitated businessman goes to work...

Anxiety that seriously interferes with the individual's performance at work, at home, or in the community may be regarded as moderate to severe in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

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mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming...	21 mg.
Ephedrine HCl	16 mg.

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DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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Genetic Counseling*

Erwin G. Rerrick, M.D.

In 1866, Mendel published his work on hereditary transmission, utilizing the green pea. Mendel's work went unnoticed for many years and it was rediscovered by Correns in Germany, Tschermek von Seyssenegg in Austria, and by van Vries in the Netherlands. Progress was slow. Few metabolic disorders were known at that time and hereditary transmission was suspected. Garrod's investigation concerning alkaptonuria (ochronosis) led him to the conclusion that this disorder was an "inborn error of metabolism," due to recessive gene. Until about 1950, only few "inborn errors of metabolism" were known and described. The earliest condition, cystinuria, was described in 1810, and later, in 1859, alkaptonuria. The number of diseases belonging to the errors of amino acid metabolism has reached 27 by now.

The term "gene" was introduced by Johannsen in 1911 and by definition it represents a unit of function, consisting of many parts and it is also regarded as the unit of heredity. The genes are arranged in a linear fashion along the chromosomes and each gene has a precise position, known as a "locus."

In 1945, Beadle and Tatum introduced the one gene-one enzyme concept, stating that each biochemical reaction is controlled by a different single gene and that all biochemical processes are under genic influence.

In 1949, Pauling, Itano, and his co-workers found that the hemoglobin in sickle cell anemia migrates in a different fashion from normal hemoglobin and a new term "molecular disease" has been introduced. It was also demonstrated that the formation of the abnormal hemoglobin is related to a recessive Mendelian gene.

All inborn errors of metabolism and all genetic diseases represent molecular disease because we presume that the observed anomaly is the result of altered protein molecules. However, the alteration of the molecules in sufficient quantities produced to be measured and investigated are seen only in the hereditary hemolytic anemias.

In recent years, the one gene-one enzyme theory has been greatly strengthened and expanded to include proteins which are not enzymes and it is also extended to include complex proteins made up of non-identical polypeptide chains linked in various ways.

The term "molecular genetics" is utilized to reflect the Mendelian genetics in molecular terms. The genetic material resides with the deoxyribonucleic acid (DNA), the nucleic acids are macromolecules, containing sugar, (ribose), phosphate and nitrogen containing base, purine or pyrimidine. They combine to form a nucleotide which, in turn, combine and form polynucleotides. X-ray diffractions studies by Wilkins revealed that the DNA molecule has a spiral shape and contains several polynucleotide chains. Watson and Crick developed their model of DNA structure in 1953. The molecule is made up of two long polynucleotide chains twisted in such a form that it becomes a double spiral. The chains are in opposite directions and are held together by hydrogen bonds. It is estimated that there are about 10 nucleotide pairs for each complete turn of the double chain. DNA directs the formation of polypeptides which are made up of amino acids and are placed in a specific sequence. It was also shown that the properties of the polypeptides are related to the order of the amino acids in the molecules. DNA has to replicate accurately to be able to transmit genetic information without error. This was confirmed by Meselson and Stahl, in 1958, utilizing E. Coli. The bacilli were grown on media containing N^{15} and then transplanted to media prepared without tagged N. After the second generation, the weight of the labeled and unlabeled N was in a 3:1 distribution. In the DNA, the various segments are called "locus," which are sequences of nucleotides.

RNA polymerase copies the information from the DNA and the replica is called the messenger RNA and is identical with the base sequence of the DNA. The messenger RNA is formed in the nucleus and it passes from there to the cytoplasm. Next, the transfer RNA carries activated amino acids along the template of the messenger RNA. The third is the ribosomal RNA which appears to have non-specific function in the synthesis of polypeptides. The control mechanism of the genes in humans is not well known. In bacteria, the genes which form the templates for the messenger RNA are the structural genes. It is believed, since all genes cannot function at the same time, a regulator mechanism is also present. Mistakes in sequence of the nucleotide constituents, during replication, are the possible causes for gene mutation.

For many years, the cytological observation of the cells in division provided the basis for the idea that the chromosomes are responsible for transmission of traits within family groups. The sexually reproducing higher organisms contain a double (diploid) set of chromosomes. The germ cells contain only one (haploid) set. Occasionally, in cytogenetic studies, polypoid numbers (multiples of 46) are seen.

The morphological pattern of the chromosomes has been an intriguing subject. They were studied under various conditions for many years without results and the exact number of the human chromosomes was not known until 1956. While the complex constitution of chromosomes was studied by biochemical methods, at-

* From the Department of Research: Peter W. Bowman, M.D., Director and Department of Pathology; Erwin G. Rerrick, M.D., Director Pineland Hospital and Training Center, Pownal, Maine.

tempts were made to study them with cytochemical procedures.

The chromosomes can be divided into the autosomes and into the sex chromosomes. Females have two X chromosomes and males have X and Y. The replication of the chromosomes proceeds along two mechanisms: meiosis, reduction of chromosomes and each gamete (ovum or spermatozoa) contains half the number of the previous cell. These cells are haploid. The other type of multiplication is mitosis: there is a lengthwise separation of the individual chromosomes which migrate to the opposite ends of the spindle. The daughter cells receive full complement of the original cell from which they are derived.

The differential localization of DNA and RNA in the chromosome is the result of the work of Brachet and Kurmick. RNA in the cytoplasm is stained red with pyronine and DNA, green with methyl green.

The separation of the individual chromosomes, as it is now known, was solved in 1952 by Hsu. He noticed the separation of the chromosomes into an easily identifiable pattern and the occurrence was due to the inadvertent use of hypotonic solution in one of his experiments. The exact number of the chromosomes was established by Tjio and Levan using colchicine and hypotomic solution in a cell culture. The correct chromosomal count was found to be 46 and not 48, as was believed for many years.

Moorhead and co-workers have developed a good technique for cytogenetic studies. It is usually performed by culturing peripheral blood, bone marrow, or skin biopsies. With the help of this discovery, the door was open to a relatively easy technique.

The morphological and numeric changes of the chromosomes are not always hereditary in the usual sense, but are rather related to meiotic or mitotic error; however, hereditary factors may have a predisposing effect. The observation and description of chromosomes from peripheral blood, bone marrow, tissue cultures, the tagging technique with radioisotopes opened the door to detect the effects of chromosomal excess, deletion or rearrangement of chromosomal fragments. Almost every day new aberrations are reported and while cytogenetic peculiarities were seen only in experimental genetics, they are now everyday occurrences. There was much confusion and need for uniformity in the nomenclature. The Denver Conference, in 1960, established a nomenclature and has revised designations which can be easily understood. The somatic chromosomes are divided into 7 groups and are numbered from 1 to 22. The other group are the sex chromosomes XX in females and XY in males. The 7 groups are lettered from A to G and certain morphological appearances were utilized so as to place an individual chromosome in the proper group.

Chromosomal anomalies are reflected in aneuploidy, if the chromosomal number is not the exact multiple of the haploid number. If an extra chromosome in a 47 chromosome karyotype is identified, then efforts are made to place it in the proper group and then this particular set becomes trisomic. If a chromosome is missing from a group, the set is monosomic. Mosaic means an alternating number, let us say 46, and 47 evenly distributed, suggesting a double cell line.

Other recognized anomalies are deletions reflected by the loss of a portion of a chromosome. A ring chromosome is a structure which is the result of the loss of both ends followed by unification of the broken ends to form a circular structure. Such a structure can replicate if it has a centromere. Other commonly observed anomalies are the duplication, inversion, and translocation. The chromosomes divide regularly along the long axis. If the division occurs perpendicularly to the long axis, then an iso-chromosome is formed. The iso-chromosomes are usually described with sex chromosomal anomalies, but, on occasion, are found in the autosomal group.

The most common anomalies are the trisomies. The most common trisomy is seen in Down's syndrome, in which disorder there are three No. 21 chromosomes found. In the trisomy 18, there are three structures instead of two of the No. 18 chromosomes. This disorder is generally severe and the affected infants have a short survival rate. Trisomy involving the chromosomes of Nos. 13 to 15 have also grave consequences. Anomalies of the heart, cleft lip and palate, anomalies of the genitalia and characteristic dermal anomalies are common.

Other anomalies are the partial deletion of the short arm of a B group chromosome and the syndrome is called, "cri du chat." Deletion of a portion of the 21 chromosome, called "Philadelphia," is frequently observed in chronic granulocytic leukemias. The anomaly of the chromosome 21, as noted in Down's syndrome, and the partial deletion of a similar chromosome in chronic granulocytic leukemia suggests an association, possibly the maturation of blood cells. It is noted that mongoloids are about six times more susceptible to leukemia than non-mongoloids in the same age range.

Sex chromosome anomalies are usually associated with mental retardation. These anomalies are seen and identified with ovarian and seminiferous tubular dysgenesis. Individuals without sex chromosomes are not observed. O Y constitution, while theoretically possible, has not been noted. The basis of numerical anomalies of the sex chromosomes is usually non-disjunction. The non-disjunction probably occurs at the level of meiotic division.

With special techniques, the sex difference in cellular morphology can be demonstrated. Barr and Bertram discovered, in 1949, in the nerve cells of female cats small bodies. The development of the buccal mucosal smear made this technique available for clinical practice. The Barr body or sex chromatin is a small mass in the nucleus of the cell, located on the membrane. Buccal smears from normal females will reveal from 20 to 60% of chromatin bodies. The Barr body is not seen normally in cells from males. If the sex chromatin test shows an unusual percentage, anomalies of the gonads

is expected. Occasionally, double or triple Barr bodies are also found and suggest supernumerary X chromosomes. The number of Barr bodies equals one less than the number of X chromosomes.

Disorders affecting more than one member of a family are not hereditary. However, there are many situations that should alert the physician to suspect chromosomal abnormality. Early recognition will enable adequate management so that serious medical problems or social maladjustments may be averted or lessened. There are certain outlines that should be followed in order to determine heredity, according to Neel and Schull:

1. The appearance of a certain disease in a definite proportion and pattern among persons related to each other, when environmental causes can be excluded,
2. The absence of a disease in unrelated persons,
3. Characteristic onset, age, and course, without known precipitating factors,
4. Greater occurrence of incidents in monozygotic than in di-zygotic twins.

In order to establish the presence of an hereditary factor, a definite plan should be followed. In addition to the conventional information, name, age, etc., a careful past history of the mother, father, and relatives should be taken. The ethnic group of the parents should be established, the patient carefully examined and adequate tests performed. All data should be collected which seem to be relevant to understand the condition at hand. Information on the maternal exposure during pregnancy to drugs, cytotoxic agents, radiation often may be of considerable value. If all data are gathered, they will serve as a good source for genetic counseling and also for clinical practice. Often the knowledge that a certain disease is present in family members provides the physician with a good indication of the nature of the disease and proper tests may confirm the diagnosis. Early diagnosis is, in many instances, very important. The clinical manifestations of inborn error of amino acid metabolism vary. Some, such as alkaptonuria, hardly interferes with the patient's normal life span. In other instances, if not recognized early and treated whenever possible, mental retardation will result and often early death. More than 50% of the inborn errors of amino acid metabolism are associated with various degrees of mental retardation. Indications for sex chromatin studies are feasible if there are ambiguous genitalia, growth disturbance, mental retardation with sex anomalies, primary amenorrhea, delayed puberty, hypogonadism, and if the clinical signs of Kleinfelter or Turner syndromes are noted. Chromosome analysis will follow if a phenotypic female is sex chromatin negative, if a male is chromatin positive, if there are multiple Barr bodies, and, in instances when a sex chromatin negative male reveals on examination, hypogonadism.

The recognition of the fact that the etiology of many metabolic diseases, somatic anomalies, and endocrine disorders are closely related to genetic factors have opened up the door to genetic counseling. The rapid advances in medicine, the array of diagnostic tests, proper treatment, antibiotics, etc., are responsible for the preservation of the "unfit." In a broad sense, the mentioned achievements are dysgenic. Since persons affected with genetic diseases are surviving and can reproduce, there is an increasing penetration and dissemination of deleterious genes within the population.

In increasing numbers are families or individuals found who are interested as to whether or not a certain disorder occurring in their families is hereditary or not. The primary function and aim of genetic counseling is to disseminate understanding and knowledge concerning genetic problems as they arise. Parents, relatives with unfavorable traits, want to know whether or not future children are likely to exhibit the same disease.

After careful family and clinical history, and a physical examination (including the necessary laboratory tests) performed, a diagnosis may be established. The obtained information may indicate an inherited condition. It may have a dominant, recessive, or sex-linked pattern and the genetic risk may be calculated. In some instances, it appears that genetic is obviously involved but the pattern of inheritance is not clear. Such disorder is acatalasemia which may or may not be inherited as a recessive trait.

Genetic counseling is "eugenic," a term coined by Galton, and covers aspects for the improvement of the human race. While the theory of this idea is advantageous, in practice there are many difficulties encountered. Genetic counseling has a great potential because it is estimated that about 1 in 50 of newborn children has some physical or mental problem, due to genetic factors, to such a degree that genetic counseling becomes important. Genetic counseling is not only important to certain families, but it also has public health aspects. In general, after all the information is obtained, a fairly good prognosis can be established as to the possible involvement of the disease in additional offspring. The decision as to whether to practice eugenics (no more children) or dysgenics (the risk of more diseased children) is left up to the parents or to the interested individual.

Genetic counseling is rapidly growing throughout the country and additional units are being established. With those thoughts in mind, it was decided to establish a genetic counseling clinic in our institution. Patients are admitted on a referral basis and all of our facilities are being used to arrive at a proper conclusion with respect to the disorder for which the patient has been referred.

In the foregoing, a very short summary is given relating to the development of genetics and genetic counseling. Large amount of literature is available and it is hoped that this review will be helpful to those who are interested in the subject.

Continued on Page 42

The Journal of the Maine Medical Association

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Across The Desk

Five New Medical Schools

CHICAGO – Five new medical schools opened this fall, and others are increasing their enrollments of beginning medical students.

The result is an increase of first-year medical students to an estimated 9,280, compared with 8,964 last year, says *The AMA News,* published by the American Medical Association.

There now are 94 U.S. medical schools in operation. Eleven other new medical schools are continuing development programs. These developing schools, plus the five just put into operation, are expected to be graduating an additional 1,062 medical students annually by the mid-1970's. Medical schools will then be graduating about 10,000 students annually.

Total medical school enrollment was 82,835 last year, and is expected to increase substantially this year.

The new schools are the University of Arizona College of Medicine, at Tucson; Brown University's Program in Medical Science, at Providence, R. I.; the University of Hawaii School of Medicine, at Honolulu; Michigan State University's College of Human Medicine, at East Lansing, and Pennsylvania State University's Milton S. Hershey Medical Center, Hershey, Pa.

In addition, freshman enrollment has been increased five each in the schools of medicine and dentistry at Creighton University, Omaha, Neb. The increases will boost medical school enrollment to 82 freshmen and the dentistry division enrollment to 51 freshmen.

Students are expected to be admitted in September, 1968 – two years ahead of schedule – to the new campus of the New Jersey College of Medicine and Dentistry in Newark. (This is a new campus for an existing medical school.)

The University of Arizona welcomed a class of 32 when it opened its $7.3 million medical school complex in September. A full enrollment of 64 students is expected about 1969, according to Merlin K. DuVal, Jr., M.D., dean of the school.

While Brown University admitted its first medical school students in 1963, that class this fall reached the equivalent of its first medical year. Under the direction of Mac V. Edds, Jr., M.D., this privately owned and supported university has earmarked a $17.1 million medical school expansion program. The medical school offers a six-year program, with the final three years emphasizing independent study and research. The school envisions a maximum enrollment to 50 students per class.

Twenty-seven students are enrolled in the University of Hawaii's School of Medicine. Windsor C. Cutting, M.D., dean, says construction is expected to start within the next six months on a $7 million medical school building, but meanwhile, classes are being conducted in other campus buildings, as well as in Leahi Hospital.

Michigan State University's College of Human Medicine is directed by Andrew D. Hunt Jr., M.D., dean. Catergorized as a "two-year" school, its program is considered as a "continuous six-year experience," with "medical school" training starting in the fourth year after three years of undergraduate work. The school is aiming for an enrollment of 64 students per class and is completing plans for an $11.8 million Life Sciences Building.

A class of 40 is enrolled in the new College of Medicine of the Milton S. Hershey Center of Pennsylvania State University. The $50 million complex, under Dean George T. Harrell, Jr., M.D., has devised an education program which will "emphasize problem solving through the scientific method." – *News Release from the American Medical Association*

New Directions In Thrombosis Study Are Charted By International Group

Disorders of blood clotting are in for a thorough study – something the experts say is long overdue. An international group of authorities on thrombosis met in Washington under the auspices of the National Academy of Sciences. After taking a comprehensive look at the broad medical and scientific aspects of the problem,

the experts agreed to undertake further study and discussion in detailed workshop conferences. They also approved the idea of collaborative research to be done by small groups working in a single laboratory, and agreed that standard tests should be set up in order that the thrombosis-prone individual could be more easily recognized. In a related move, the National Heart Institute is forming a committee on thrombosis which will replace the present Committee on Thrombolytic Agents. – *Washington Report on the Medical Sciences,* Dec. 4, 1967

More Drugs Are Added To USP Variance List; Recall Expected For A Generic Chloramphenicol

More ammunition for the drug industry's argument that chemically identical products are not necessarily of the same effectiveness has been furnished to Sen. Gaylord Nelson's (D-Wis.) Small Business Monopoly Subcommittee. The independent U. S. Pharmacopoeia (USP) has given Nelson a list of six drugs which, although they meet USP standards, vary in therapeutic effectiveness. The six are thyroid tablets, bishydroxycoumarin, spirnolactone, aspirin-coated tablets, prednisone and diphenylhydantoin. Parke-Davis has told Nelson and FDA it found that the "equivalents" of its chloramphenicol – Chloromycetin – did not measure up to the brand-name product.

Meantime, the ramifications of Parke-Davis' study of chloramphenicol products continue to grow. Word is that a large generic manufacturer whose chloramphenicol figured in the study, will begin a massive recall of its product this week. Other recalls are expected to follow as a direct result of the Parke-Davis findings. *Disturbed by the Parke-Davis data, FDA is launching studies of 36 other brands of chloramphenicol presently on the market.*

The Parke-Davis research was discussed publicly, when Leslie M. Lueck, the company's Director of Quality Control, testified before the Nelson subcommittee. Nelson kept his questions about the P-D tests to a bare minimum and dismissed the results as one of those "rare exceptions" to the general rule that chemically equivalent products produce the same therapeutic effects. Instead, Nelson wanted to discuss the lack of adverse reactions information in a British medical journal advertisement. – *Washington Report on the Medical Sciences,* Dec. 4, 1967

A Hiccup Remedy That Works

CHICAGO – Believe it or not, there's a hiccup remedy that almost always works – but it should be used only by physicians.

The (Oct. 2) *Journal of the American Medical Association* reports on the process, called pharyngeal stimulation.

It involves inserting a flexible tube into a nostril and stimulating nerves in the pharynx, the area at the back of the mouth where nasal passages join the throat.

The process worked in 84 of 85 cases, report three physicians at the University of Chicago School of Medicine and a fourth colleague on the faculty of medicine at Cairo University, United Arab Republic.

Hiccups can be troublesome or even dangerous during surgery. These involuntary contractions of the diaphragm have a variety of causes – and the attempted medical remedies have been almost as numerous as those which come from folklore.

Physicians, too, have tried such remedies as swallowing ice, holding the tongue, frightening with a loud noise, and pressing on the eyeballs. Their results have been about as unpredictable as those of laymen. On a more sophisticated level, they have tried drugs and nerve blockage, often with similar results.

Hiccups seem to occur frequently during light anesthesia. One remedy has been to deepen the anesthesia; however, several times more anesthetic is required to stop hiccups than merely to induce unconsciousness. In some cases, this is undesirable.

Hiccups stopped immediately in 64 anesthetized and 20 conscious persons, the report said, when pharyngeal nerves were stimulated by jerky, back-and-forth movements of the tubing. Patients ranged in age from 18 months to 73 years.

In ten cases, a variety of drugs had failed to stop hiccups, but they ceased almost immediately with the new method, according to the authors. In five cases, the hiccups returned, but stopped during retreatment. Only one anesthetized patient failed to respond to treatment.

A caution should be repeated, however: inserting a tube or other object deeply into nasal passages can be dangerous, and should be done only by a physician. Do not attempt this remedy yourself.

The reasons some harmless "home remedies" are sometimes successful – such as swallowing ice or water – may be that they, too, result in stimulation of the pharyngeal nerves, the report points out. – *News Release from the American Medical Association*

House And Senate Committees To Look At Medicare Payment

As a result of this year's hearings on Medicare amendments, both the House Ways and Means Committee and the Senate Finance Committee are committed to take a hard look at the way the Government is paying for Medicare services. Staff members are discussing the possibility of holding a joint investigation. Much of the focus will be on capital financing – should it be included in the formula for determining reasonable costs of Medicare service or should capital financing for hospitals be provided from another source such as Hill-Burton? This question will also be a prime topic for the Advisory Commission on Health Facilities, appointed last fall by President Johnson.

Meanwhile, Social Security is beginning to develop alternative methods of reimbursement. One idea being discussed would prohibit hospitals from spending the two percent reimbursement allowance on elaborate capital improvements such as new construction. The allowance could be used only to improve services.

Unpublicized fact on the Medicare amendments: The health benefits were not increased substantially, yet the part of the Social Security tax applicable to health insurance increased .31 percent. In dollars and cents, this is a $1 billion increase. – *Washington Report on the Medical Sciences,* Dec. 25, 1967.

FDA Advisory Group Recommends Regulation of Medical Devices

FDA's Advisory Committee on Obstetrics and Gynecology has given a boost to the agency's hopes for authority to regulate medical devices. A recommendation that devices legislation be enacted was part of a comprehensive report on intrauterine contraceptive devices. It was prepared by the committee over the past year. The group is the same one that released results of a study of oral contraceptives a year and a half ago, and plans to report next year on a new study of the pill. By and large, the committee report gave IUD's a clean bill of health for safety and effectiveness. Incidence of adverse reactions is roughly the same as with the orals, the committee found. But the most widely observed reactions to IUD's – cramps, bleeding and expulsion – contrast with the systemic disorders that have been linked with the pill.

AMA and Sen. Gaylord Nelson's (D-Wis.) Senate Small Business Monopoly Subcommittee remain deadlocked over who's going to represent the medical organization in the Senator's continuing drug price hearings. *AMA's sole candidate still is Dr. Edward Annis, former AMA President and now a member of the Board of Trustees.* Nelson says he'll be glad to have Dr. Annis appear. But the Senator also wants as witnesses current AMA President Dr. Milford O. Rouse, Drug Council chief Dr. Thomas Hayes, and Glenn Knotts, head of the advertising evaluation office. One of Nelson's staff members commented, "they want to run our hearings, and we're not about to let them do it."

At a meeting Tuesday, FDA will outline how it expects to implement recommendations stemming from the National Academy of Sciences-National Research Council's drug effectiveness review. The agency will attempt to cover all bases – administrative, regulatory and legal. Last week FDA announced the first *result of the NAS-NRC* review, a move to ban bioflavonoids. (See WRMS, Jan. 15) – *Washington Report on the Medical Sciences,* Jan. 22, 1968

Regional Medical Programs Being Used To Help Improve All Health Services

Look for the Regional Medical Programs to become a major force in the Government's efforts to improve the system of personal health services in the U.S. The new emphasis for the regions came into sharp focus at last week's Washington meeting of officials of the 53 regional programs. Their consensus was that application of new knowledge of heart disease, cancer and stroke should serve as the means toward improving health services in general. This broader role for the regions apparently has the cautious endorsement of the AMA. AMA President-elect Dwight Wilbur told the conferees that the program "can make a real contribution to personal health services if it continues to pursue what appears to be its main thrust today – to serve as a catalyst. . . ." Dr. Wilbur was impressed with the way in which the regional programs have stimulated local initiative to improve health services instead of imposing health services patterns outlined in Washington. *Until now, AMA would only endorse the continuing education aspects of Regional Medical Programs.*

Research on delivery of health services is playing an increasingly important role in Regional Medical Programs. Many regions have begun using systems analysis techniques for making decisions on the organization of health services. The Division of Regional Medical Programs, the PHS Division of Medical Care Administration, and the Association of American Medical Colleges are planning a seminar on health services research. The meeting will be held March 25-29 at the Johns Hopkins University School of Hygiene and Public Health in Baltimore. In short, the Regional Medical Programs are going to be a very important part of the Health Services Administration, part of the HEW health reorganization. – *Washington Report on the Medical Sciences,* Jan. 22, 1968

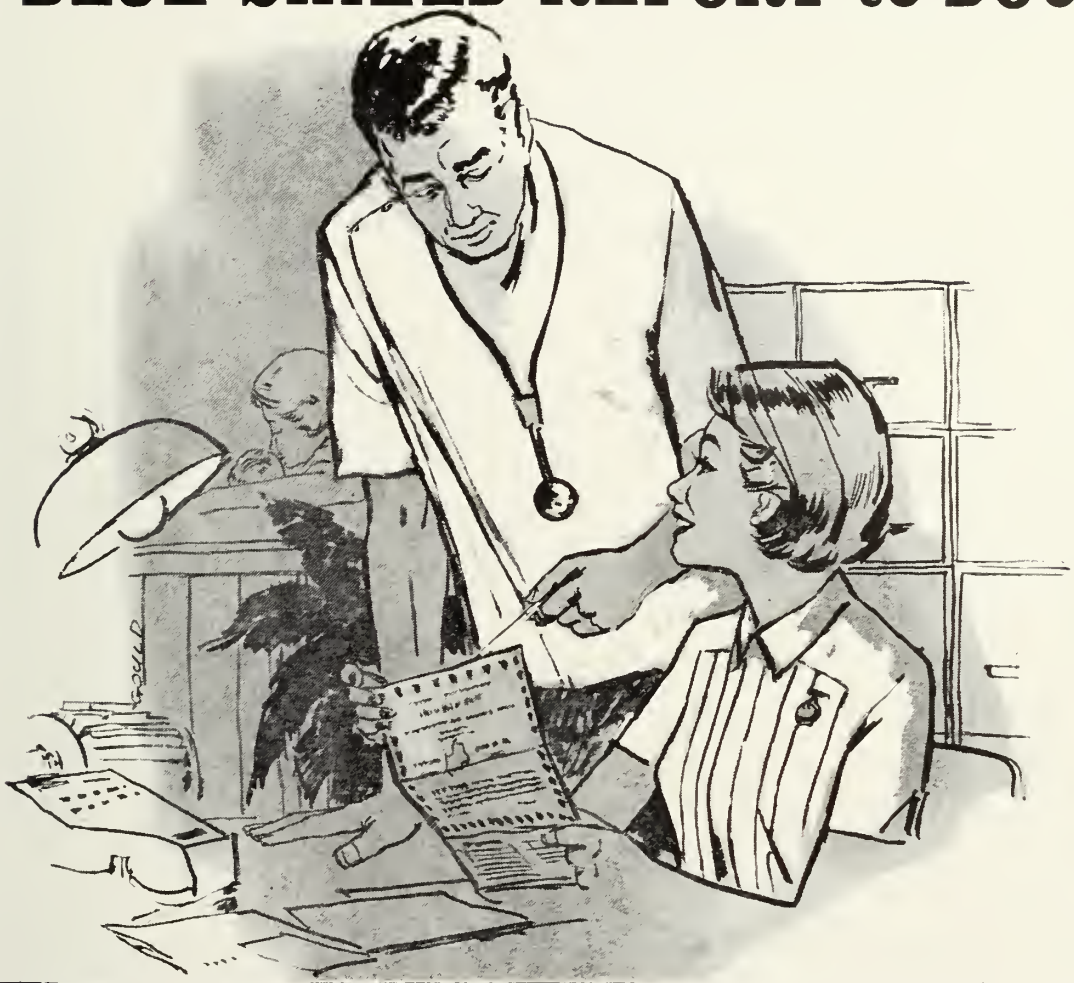
Health Research Construction Again is Target of Budget Cut

A sidelight on the fiscal 1969 budget: HEW has been frankly embarrassed about the relatively small amount of money it has been able to afford over the past three years for Health Research Facilities Construction grants. When the program was passed in 1965, Congress authorized a total of $280 million for fiscal years 1967, 1968, and 1969. But probably no more than $90 million will be spent by the end of fiscal 1969. The budget has consistently asked for less than the authorization, and even then has been cut back. HEW legislative planners are considering a possible solution. In the forthcoming bill to extend the Health Research Facilities Construction program, HEW may not ask for a top ceiling on the authorization. Instead, Congress may be asked to provide that the HEW Secretary request such funds as are needed to carry on the program. This would eliminate opportunities to compare budget requests with authorizations. – *Washington Report on the Medical Sciences,* Feb. 5, 1968

LBJ and Dr. Appel Express Concern Over Rising Costs of Medical Care

Still worried about rising physician charges, top officials at HEW are delighted with a statement made last week by Dr. James Z. Appel, former president of AMA. Appel told the Philadelphia Medical Society that doctors must voluntarily set "reasonable income ceilings" or Government price controls might result. HEW health officials are fearful that a continuing rise of the Consumer Price Index listing for physician fees will increase pressure of the Federal Government to set fee schedules under Medicare and Medicaid. President Johnson mentioned rising medical costs twice in his State of the Union address last week. He said he plans to recommend to Congress "measures to stem" the cost spiral, apparently a reference to continuing efforts to improve the efficiency of health services. – *Washington Report on the Medical Sciences,* Jan. 22, 1968

A BLUE SHIELD REPORT to DOCTORS



REPORT # 10

Filing Of Complex Procedures

If a procedure is unusually complex or difficult and does not have a listed scheduled allowance, a photocopy of the discharge summary and/or operative report stapled to the claim form will save time and result in maximum consideration of the subscriber's benefits.

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Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.



Dosage: 50-200 mg. (¾-3 grains) at bedtime.

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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.
Brunswick, Maine

The "Image" of Cancer*

STANLEY WARREN**

Why does 57% of the nation's population avoid such elementary health precautions as going to a doctor to have physical examinations that includes cancer tests? Why, if a person's health — even life — is at stake, do a majority of our citizens refrain from checkups?

This is the concluding and summarizing article of a six-part series which has examined the motivational, attitudinal and environmental deterrents that the public displays towards physical exams and tests for cancer.

Characterizing "non-goers" as those who have never had a physical checkup that included basic cancer tests, we find that this group significantly outnumbers those who regularly go for checkups called "goers," and those who went previously but have failed to continue the practice. These are called "past-goers." "Goers" number 26% of the population, with "past-goers" weighing in at 17%.

The American Cancer Society's nationwide survey, conducted by Lieberman Research, Inc., leading New York research house, brought out that there were eight basic reasons why people do not have physical examinations that include cancer tests.

- They are healthy and therefore have no need for checkups. In effect, they say "I feel fine and I have no symptoms, so why go for a checkup?" This implies less inclination to accept the value of preventive medicine as well as a tendency to avoid medical treatment.
- Non-goers, the survey showed, have had less personal contact with cancer than regular goers. Non-goers often adopt the "it won't happen to me" attitude, because having had less knowledge of cancer, they underestimate the disease.
- Non-goers are somewhat less hopeful about chances of recovery from cancer. This is based on the underestimation of the prevalence of cancer.
- Non-goers often confess that they refrain from checkups because they are afraid of what might be discovered. They do not, as goers do, look forward optimistically to good news, but are frightened that they may hear bad news.
- Non-goers focus their thinking on negative aspects of checkups, rather than on the rewards accruing from successful passing of a physical examination. Non-goers, it was shown, are not aware of the benefits that "peace of mind" can bring following a cancer test. Non-goers often believe that checkups are complicated and difficult to submit to.
- Non-goers have mixed or ambivalent images about people who do go for checkups. In some ways, the survey revealed, non-goers tend to look down on goers; while in other ways they look up to them. Goers, according to non-goers, are usually "overly cautious" and "probably hypochondrical," and are apt to be labeled "Nervous Nellies." Yet non-goers often recognize that going for checkups is an intelligent and responsible thing to do. Thus, the ambivalency of the non-goer. He knows he should take care, but just cannot bring himself to the point of action.
- Non-goers, as the survey revealed, think cancer checkups cost too much and take too much time. These factors are particularly germane to lower income and less educated people.
- Finally, the last but by no means least important reason non-goers stay away from cancer tests is that they are not convinced that doctors are in favor of checkups. Doctors have helped immeasurably in getting people to go for checkups — particularly in the case of women (Pap tests, female checkups and the like) but the potential contribution that doctors can make is actually only partially tapped.

Thus, in general, these ACS findings indicate that lack of perceived need for checkups is a key reason why non-goers persist in not undergoing examinations and explains in some measure why the cancer toll continues to rise. Basically, non-goers are not reckless with their health, for, as the survey shows, they do not worry too much about checkups one way or another. As far as they are concerned, they are healthy and have no symptoms, so "why go to a doctor?"

This whole series, based as it is on an in-depth nationwide survey undertaken by the American Cancer Society, points out that it is not enough just to remind people to go for cancer checkups. The duty of the ACS is to inject strong reasons into any campaign or programs being put together to urge people to have checkups. These are the first lines of defense against one of the nation's most murderous killers.

With over 96% of those queried reporting they had heard of the American Cancer Society, here's how the respondents answered the question: "What does the ACS do?" DK and NA stand for "Don't Know" or "No Answer," respectively.

	Total	*Current Goers*	*Past Goers*	*Non-Goers*
Research	72%	76%	71%	70%
Care	30	34	30	27
Educational	21	29	19	18
Collects money	18	18	21	17
Helps hospitals	6	6	6	5
Detection	6	6	6	6
Good organization — general	2	2	1	2
Bad organization — general	1	2	1	1
DK, NA	9	6	10	10
Total	#	#	#	#

Adds to more than 100 per cent because of multiple mentions

*Part six of a six-part series from American Cancer Society News Service Release.

**News Editor, American Cancer Society, Inc.

Maine Heart Association Notes



20 Winter Street, Augusta, Maine

The Professional Education Committee of the Maine Heart Association offers many publications, free of charge, concerning cardiovascular subjects of interest to both the physician and layman. The most recent of these publications are listed as follows:

If You Have Angina

This ten-page booklet points out that most angina patients can look forward to years of active living. It also explains the condition and how to live with it as well as why it develops.

Revised Booklet On Blood Pressure Determination

This recently revised publication of the Central Committee for Medical and Community Program of the American Heart Association is entitled "Recommendations for Human Blood Pressure Determination by Sphygmomanometers." The 24-page booklet points out common errors in the indirect measurement of blood pressure, indicates the means to avoid them and recommends certain standards to increase the accuracy of measurement and recording. It is the second revision of the standards first proposed in 1939.

Aphasia And The Family

This booklet serves as a guide in understanding, and helping, the person with aphasia. It describes aphasia, in lay terms, and suggests the family's role in the recovery of the patient. Physicians, nurses, therapists and others concerned with aphasia may find new material in this publication. Dr. Joseph M. Wepman of the University of Chicago acted as consultant in the preparation and writing of the material.

Diet And Heart Disease (4-page leaflet)

This leaflet is valuable in answering inquiries from lay, public, patients, students and other individuals who have a special interest in diet. It contains an eight-point program of dietary control recommended for American people as a possible means of lowering the risk of heart attack. It is based on scientific data accumulated since the publication of the 1961 American Heart Association report "Dietary Fat and Its Relation to Heart Attack and Stroke." It differs from the report in that it calls for "substitution wherever possible" rather than "reasonable substitution" of polyunsaturated for saturated fats — it recommends reduced intake of cholesterol foods — it focuses on heart disease (heart attack) but not stroke.

New Booklet Details — 6 Ways To Reduce Heart Attack Risk

This booklet is especially adaptable for waiting room distribution. It explains the major heart disease risks — cholesterol, overweight, high blood pressure, cigarettes, lack of exercise, diabetes and what can be done about them. It also brings to the layman helpful facts about the heart and circulation and about artery disease which underlies most heart attacks and strokes.

Facts On Smoking And Health

Our oversupply of leaflets concerning the hazzards of cigarette smoking would indicate a definite public resistance to free advice on this subject. We have four publications on the subject and would be more than glad to forward a supply for waiting room distribution.

Rheumatic Fever Prevention Program

For four years the Association has sponsored a program which makes low cost penicillin available to patients with either rheumatic fever or rheumatic heart disease. Any patient, private or clinic, with a diagnosis of these diseases past or present, is eligible to apply through their physician. Diagnosis, in so far as possible, should be based on the Modified Jones Criteria. For copies of the Criteria and complete details of the program write to the Association.

(For the above publications write to the Maine Heart Association, 20 Winter Street, Augusta, Maine, 04330.)

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County Society Notes

KENNEBEC

A meeting of the Kennebec County Medical Association was held at the Augusta State Hospital in Augusta, Maine on December 14, 1967. The Association members were dinner guests of the Augusta State Hospital Medical Staff and were welcomed by the Director, Dr. John C. Patterson.

At the business meeting, the following officers were elected for 1968:

President, Richard H. Dennis, M.D., Waterville
Vice-President, Joseph R. Crawford, M.D., Augusta
Secretary-Treasurer, Francis A. Spellman, M.D., Togus
Delegates to the M.M.A. House of Delegates: Drs. Alfredo Monsivais, Winthrop, Earle M. Davis and Valentine J. Moore, of Waterville, Brinton T. Darlington and Allan J. Stinchfield, of Augusta. Alternates: Drs. Richard T. Chamberlin and Richard L. Chasse, of Waterville, Theodore M. Russell and John H. Shaw, of Augusta and Richard E. Barron, Monmouth

In a brief talk as retiring President, Dr. Oh'er urged all hospital staffs in the County to continue their efforts to bring the latest scientific advances to the care of their patients and to seek out inter-hospital cooperative planning and to work actively with the Education Committees of their hospitals. Dr. Ohler also urged Society members to turn to the advantage of better patient care through the Heart Disease, Cancer, Stroke and Related Diseases program.

The scientific program of the evening was given by E. Charles Kunkle, M.D. of Portland, Maine whose subject was Arteries and Headache. Dr. Kunkle is Professor Emeritus of Neurology at Duke University.

FRANCIS A. SPELLMAN, M.D., *Secretary*

PENOBSCOT

Fifty members and guests were present at the meeting of the Penobscot County Medical Society which was held at the Twin City Motel in Brewer, Maine on December 19, 1967.

The guest speaker, Otis F. Jillson, M.D. of Bangor, Maine, spoke on Skin Manifestations of Internal Disease.

During the business meeting, the following items of general interest were recorded:

1. The difficulty of obtaining reliable information on the MIC program, and meeting with Dean Fisher, M.D.
2. The revitalization of MEMPAC.
3. The advantage of a new law establishing a Chief Medical Examiner for the State.
4. The need for an efficient method to disseminate medical news to the media statewide.

A resolution on the death of John R. Sullivan, M.D. was read into the record.

WILLIAM M. SHUBERT, M.D., *Secretary*

LINCOLN-SAGADAHOC

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on December 19, 1967.

The meeting was called to order by the Secretary, George W. Bostwick, M.D.

Alan W. Zeller, M.D. reported for the Councilor of the Third District, Edward K. Morse, M.D., of Rockland, that there will be an increase next year in the rates of malpractice insurance for some categories of physicians. Dr. Zeller also pointed out that a post of State Chief Medical Examiner has been created by law but that the position has not been funded.



One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
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Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.
Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER

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Dr. Bostwick announced the following nominating committee to bring in a proposed slate of officers for the annual elections next month: Drs. Carl R. Griffin, Jr., Ralph C. Powell and Nelson P. Blackburn.

Dr. Bostwick then introduced the speaker, Stanley E. Herrick, Jr., M.D. of Damariscotta, who discussed the Regional Medical Program: Heart Disease, Cancer, and Stroke.

The Lincoln-Sagadahoc County Medical Society met at The Ledges in Wiscasset, Maine on January 16, 1968.

The meeting was called to order by the President, Charles E. Burden, M.D.

The following officers were elected for 1968:

President, Mary J. Tracy, M.D., Damariscotta
Vice-President, Paul A. Fichtner, M.D., Bath
Secretary-Treasurer, George W. Bostwick, M.D., Newcastle
Delegates to the M.M.A. House of Delegates: Drs. Carl R. Griffin, Jr., Boothbay Harbor and Ralph C. Powell, Damariscotta. Alternates: Drs. Nelson P. Blackburn, Bath and Paul A. Fichtner

Stanley E. Herrick, Jr., M.D. introduced Drs. William H. Austin and George P. Lord of Portland, who spoke on Chronic Renal Insufficiency and its Management and Chronic Obstructive Pulmonary Disease.

GEORGE W. BOSTWICK, M.D., *Secretary*

ANDROSCOGGIN

The annual meeting of the Corporators of the Androscoggin County Medical Association met at St. Mary's General Hospital in Lewiston, Maine on December 21, 1967 with twenty-three members present. Daniel R. Shields, M.D., President, presided.

Charles W. Steele, M.D. reported on the recent meeting of Blue Shield and Otis B. Tibbetts, M.D. presented a report for the investment committee.

The report of the nominating committee, which follows, was presented by the Chairman, George B. O'Connell, M.D. and was approved:

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President, Joseph J. Rando, M.D., Lewiston
Vice-President, John W. Carrier, M.D., Lewiston
Secretary-Treasurer, Donald L. Anderson, M.D., Lewiston
Delegates to the M.M.A. House of Delegates: Drs. Daniel R. Shields, Joseph J. Rando and Wilfrid A. Cloutier, all of Lewiston and Frederick B. Lidstone, Auburn. Alternates: Drs. Paul J. Fortier, Philip L. Archambault and Gerard L. Morin, all of Lewiston and Donald H. Horsman, Auburn

Dr. Shields turned the meeting over to Dr. Rando, the new President. The members gave Dr. Shields a rising vote of thanks for his past year of service.

Dr. Archambault introduced the speakers of the evening, Mr. Clement Richardson and Mr. Lawrence Mahoney. Mr. Richardson outlined the general provisions of the workmen's compensation act (law) specifying the rights and responsibilities of the employee, employer and Insurance Co. and explained the permanent impairment section. Mr. Mahoney explained the value of an opinion, stressing reports (which should be concise, short and not necessarily voluminous), and arrangements for hearings and court. A question and answer period followed both presentations.

DONALD L. ANDERSON, M.D., *Secretary*

CUMBERLAND

The Cumberland County Medical Society meeting was held at the Sheraton-Eastland Motor Hotel in Portland, Maine on December 21, 1967 with approximately sixty-five members attending.

The nominating committee reported a new slate of officers for 1968 which follows:

President, Eugene P. McManamy, M.D., Portland
Vice-President, George F. Sager, M.D., Portland
Secretary-Treasurer, Stanley B. Sylvester, M.D., Portland
Delegates to the M.M.A. House of Delegates: Drs. Sidney R. Branson, So. Windham, Charles W. Capron, Robert W. Agan, Martin A. Barron, Jr., Stanley G. Dienst, Bernard Givertz, Thomas F. Conneen, Louis N. Taxiarchis, Eugene P. McManamy and George F. Sager, all of Portland. Alternates: Drs. Edmund W. Hardy, Falmouth, Houghton M. White, Brunswick, Paul V. Davis, Bridgton, Robert E. McAfee, William L. MacVane, Jr., Edward C. Matthews, Douglass C. Pennoyer, Alphonse Telfeian, John R. Davy and Robinson L. Bidwell, all of Portland

Charles R. Glassmire, M.D. reported on a recent meeting of the Council of the Maine Medical Association.

Edward G. Asherman, M.D. discussed the proposal for creation of a Medical-Legal Panel for consideration of Malpractice Suits. A great deal of discussion followed concerning various points in the proposal, but it was emphasized that existing plans in other states had been carefully studied and adapted to the local situation in Cumberland County. The vote on this proposal was: 5 opposed, approximately 50 in favor; so the motion for approval was carried.

Charles W. Capron, M.D., as retiring President, gave a brief address in which he encouraged the membership to think seriously about the cost of medical care and of taking an increased part in community planning of medical facilities, fearing that if this is not done by the medical profession, it will be done by lay persons. The meeting was then turned over to the new President, Dr. McManamy, who adjourned the meeting.

A meeting of the Cumberland County Medical Society was held at Valle's Steak House in Portland, Maine on January 18, 1968 with approximately two hundred members and guests attending. Special guests at the meeting were members of the Woman's Auxiliary to the Cumberland County Medical Society.

Following a social hour, dinner, and Dr. Eugene P. McManamy's introduction of the head table, Dr. William L. MacVane, Jr., as Program Chairman, introduced Judge Charles Pomeroy, the guest speaker. Judge Pomeroy gave a most interesting and detailed account of the first Medical-Legal case in the United States which involved a Maine man and many of the most famous medical and legal personalities of the nineteenth century.

STANLEY B. SYLVESTER, M.D., *Secretary*

YORK

The annual meeting of the York County Medical Society was held at the York Hospital in York, Maine on January 3, 1968.

Following a social hour and dinner, the meeting was called to order by the President, Eugene P. Wolfahrt, M.D.

The question of having evening meetings instead of afternoon was turned down.

The March meeting will be held at the Henrietta D. Goodall Hospital in Sanford.

Drs. Carl E. Richards and Paul S. Hill, Jr. gave a talk on the Keogh Bill.

CHARLES W. KINGHORN, M.D., *Secretary*

GENETIC COUNSELING — *Continued from Page* 35

Chromosome analysis by computers is not too far off and the time may come when genetic counseling will be as common at the premarital serology.

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Butisol Sodium (sodium butabarbital) acts promptly to relieve anxiety while the low dosage of reserpine builds gradually to an effective level for continuous, smooth control of tension and blood pressure. Thus effective therapy can be achieved without the hazards of more potent antihypertensive agents or of reserpine in larger doses.

Contraindications: Porphyria, peptic ulcer, ulcerative colitis, mental depression, sensitivity to either component. *Precautions:* Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthesiologist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT.

Adverse Reactions: Drowsiness, skin rash, "hangover," systemic disturbances, increased salivation and gastric secretion, nausea, vomiting, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis and optic atrophy), dryness of mouth, syncope or dizziness, epistaxis, purpura secondary to thrombocytopenia, asthma in susceptible persons, nasal congestion, weight gain, and impotence or decreased libido.

Usual Adult Dosage: Initially, 1 to 4 tablets daily for one week; maintenance, 1 to 2 tablets daily.

McNeil Laboratories, Inc., McNEIL Fort Washington, Pa.

Diarrhea

TROCINATE® 400 MG.

BRAND THIPHENAMIL HCl.

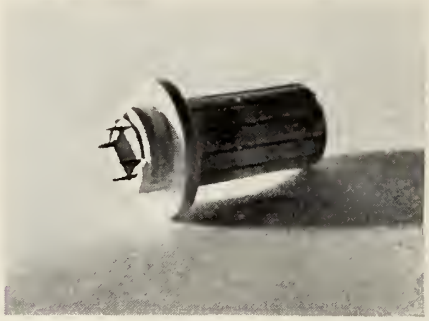
The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

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Manufacturers of ethical pharmaceuticals since 1856

To fight TB- find it first!

Make tuberculin testing routine with every physical examination.

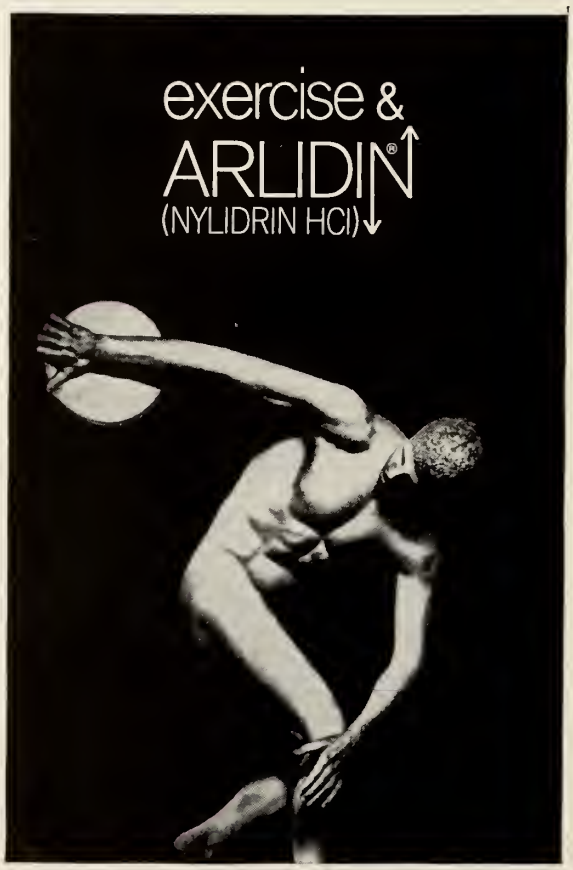


TUBERCULIN, TINE TEST (Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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330–8/6135



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(SODIUM LEVOTHYROXINE, ARMOUR) TABLETS

Synthetic Thyroid Replacement Therapy



Letter® provides all the advantages of the synthetically pure chemical sodium levothyroxine. Dosage is precise and potency is consistently uniform.

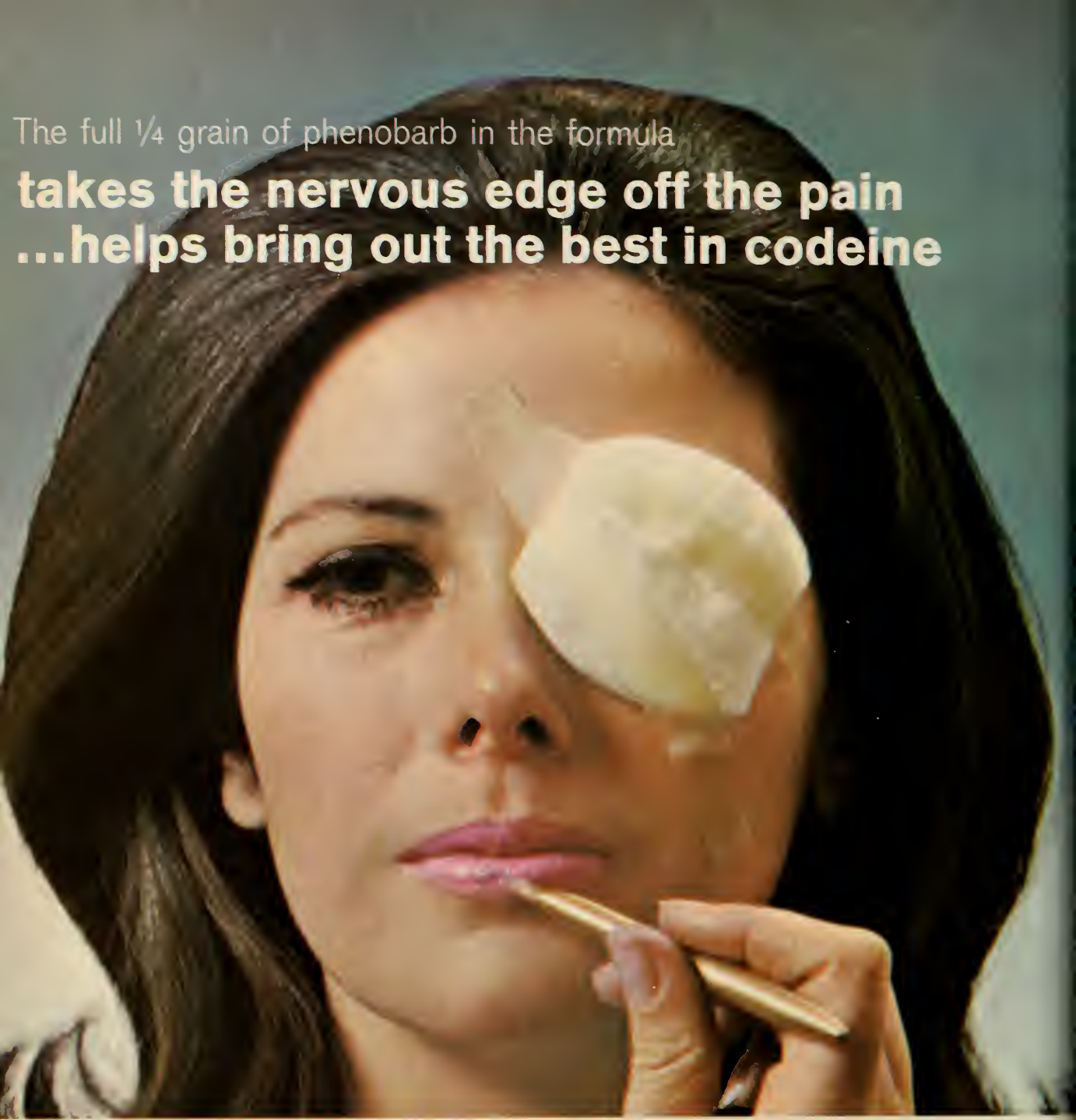
and

Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

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the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.) ..... 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) .....162.0 mg.
Phenacetin (3 gr.) .....194.0 mg.
Hyoscyamine sulfate .....0.031 mg.
Codeine phosphate.....¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
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Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

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A. H. ROBINS CO., INC., Richmond, Va. 23220

For your impatient cold patients

Two sprays from NTZ Nasal Spray—and nasal congestion, rhinorrhea, sneezing are reduced for *immediate* comfort for patients with colds.

NTZ is more than a simple vasoconstrictor. It contains:

Neo-Synephrine® (brand of phenylephrine) HCl 0.5 per cent, the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction on contact.

Thenfadil® (brand of thenyldiamine) HCl 0.1 per cent, topical antihistamine for reduction of rhinorrhea, sneezing or itching. It combats the allergic reactions that may occur in colds or sinusitis.

Zephiran® (brand of benzalkonium, as chloride, refined) 1:5000, antiseptic preservative and wetting agent to promote penetration and spread of the formula.

NTZ is well tolerated. Used in a cold it may help prevent sinusitis by opening sinus ostia and permitting drainage. It may also be used in sinusitis to help establish drainage.

The spray is best used twice, the second a few minutes after the first, repeated every three or four hours as needed. NTZ is for temporary relief of nasal symptoms, and overdosage should be avoided.

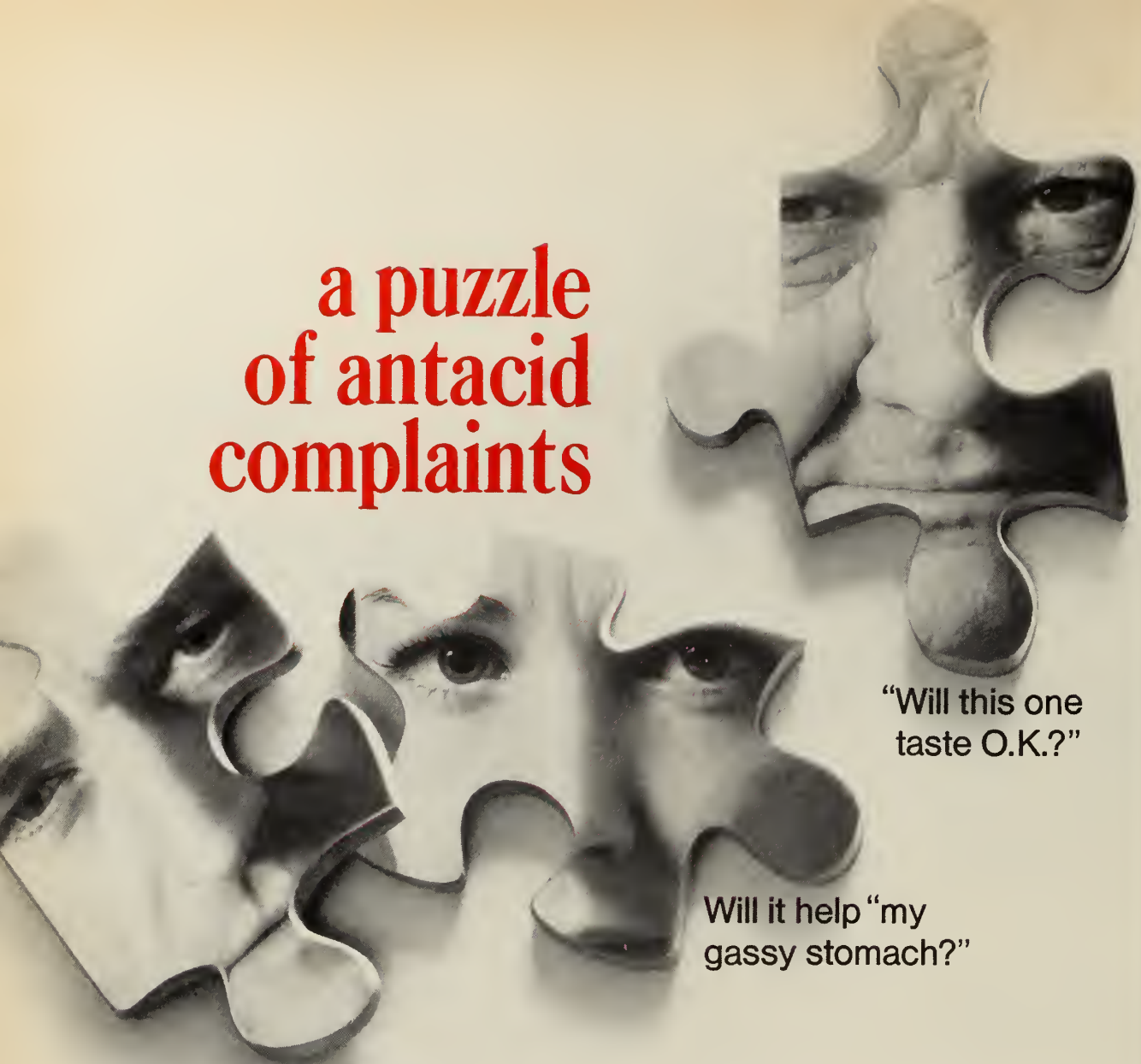
Supplied: NTZ Nasal Spray, plastic squeeze bottles of 20 ml.; NTZ Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

Winthrop

Winthrop Laboratories
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a puzzle of antacid complaints



Mylanta®

aluminum and magnesium hydroxide *plus* simethicone

a solution to peptic ulcer distress

Effective neutralization—
with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

Concomitant relief of G.I. gas distress—
with the proven[1] defoaming action of simethicone.

Prolonged acceptance confirmed—
in 87.5% of 104 patients after a total of 20,459 documented days of therapy.[2]

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

References: 1. Hoon, J.R.: Arch. Surg. *93*:467 (Sept.) 1966.
2. Danhof, I.E., Personal communication.

Stuart
Division/Pasadena, Calif.
ATLAS CHEMICAL INDUSTRIES, INC.



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No injection after all!

This penicillin produces high, fast levels—orally.

Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

Indications: Infections susceptible to oral penicillin G; prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units). Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL **PEN•VEE® K**

(potassium phenoxymethyl penicillin) Wyeth

in moderate hypertension and poorly controlled mild hypertension

(when diuretics or sedatives are inadequate, for example)



When your patients expect a lot...

like relief from hypertensive symptoms
(headache, fatigue, nervousness, palpitation or insomnia, for example)

like an up-to-date, once-a-day dosage schedule
(a schedule not unlike timed-release medication, for example)

like a daily dose of medication for peanuts
(at 10¢ a tablet, for example)

like generally well-tolerated therapy
(as described in the package insert, for example)

...give them a little
(one tablet daily)

Regroton®

chlorthalidone 50 mg., reserpine 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Regroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-B
For details, see complete Prescribing Information.

Geigy Pharmaceuticals, Division of
Geigy Chemical Corporation, Ardsley, N.Y.

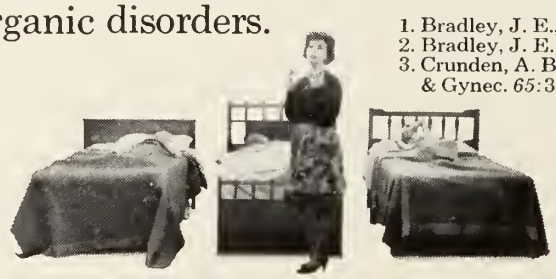
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...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst, & Gynec. *65*:311 (Feb.) 1953.



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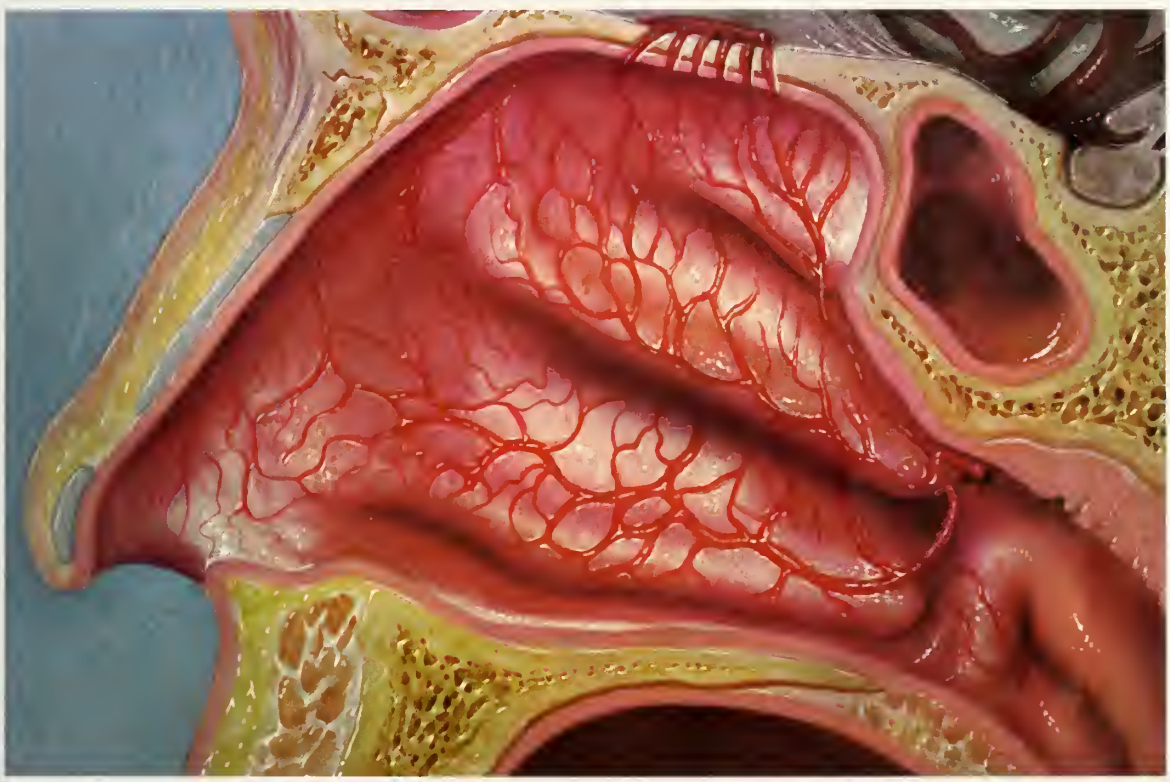
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this issue: the cold in pregnancy...

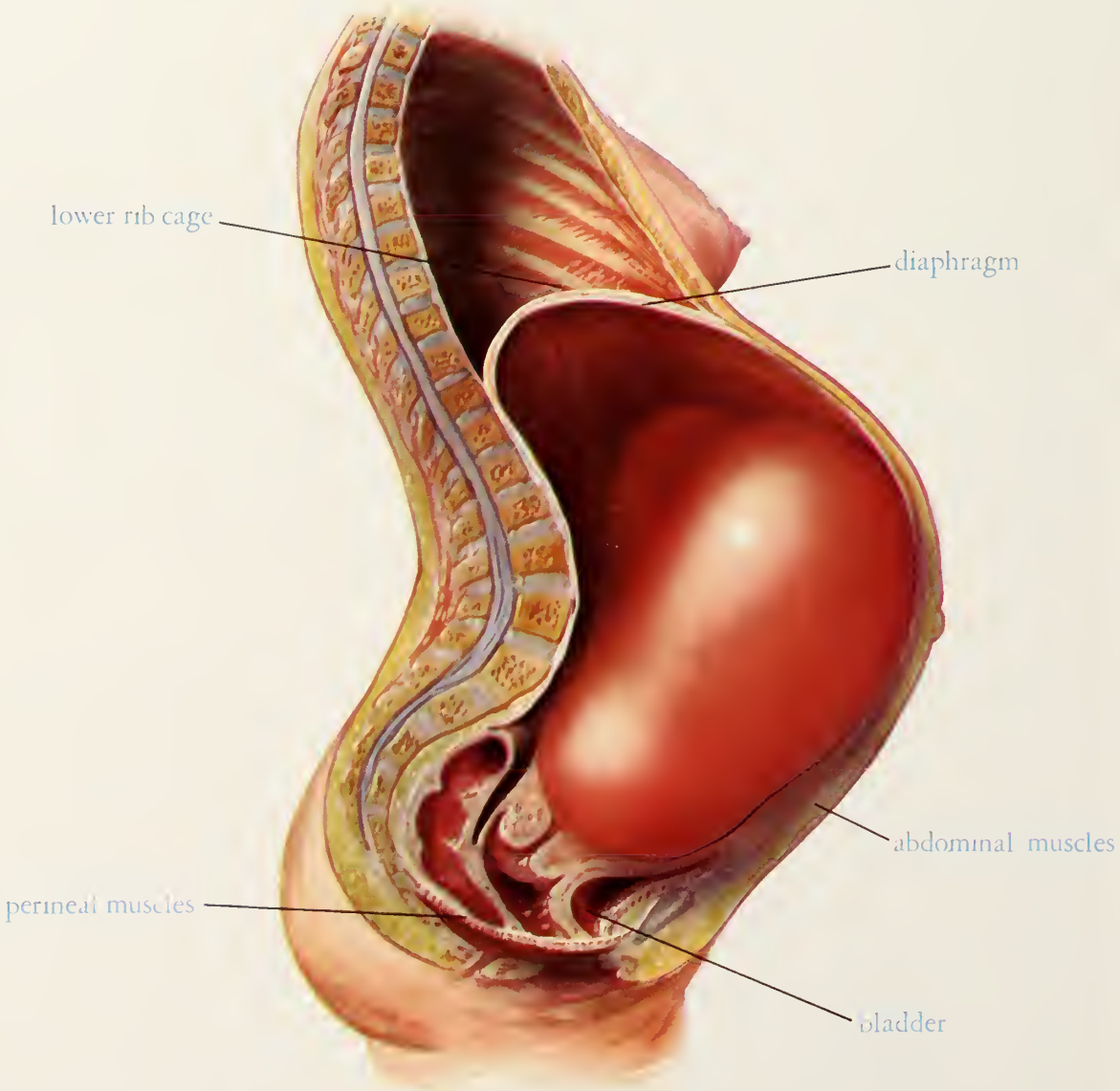
the cold in pregnancy

Frederick W. Goodrich, Jr., M.D.
Senior Obstetrician and Gynecologist, Lawrence and Memorial Hospital, New London, Connecticut

Since pregnancy and the common cold are both ubiquitous, it is not surprising that they often occur at the same time in the same patient. Incidence figures are hard to come by, but the chances are very good that any given pregnant woman will have a cold at some time during the nine months of her gestation. When she does, she will tell you that it is the worst cold she ever had. It seems to last longer and the symptoms are more distressing than they are in the non-pregnant.

For purposes of this discussion, the common cold is considered to be the well-known symptom complex which includes sore throat, stuffy nose, and a cough. Febrile states or extension of the disease process into the lower respiratory tree are not part of the common cold and will not be included in this discussion.

The clinical picture of a cold in pregnancy can be confused by a long-known physiological phenome-



non. Kiesselbach's area in the nose (on the anterior part of the nasal septum above the intermaxillary bone) becomes engorged, apparently due to hyperemia induced by the increased estrogen level which accompanies pregnancy. The amount of congestion can vary in degree from woman to woman. Some have very little congestion, others will have occasional nosebleeds from this area, still others will have symptomatic congestion to the degree that they will complain of having a "chronic" or constant cold.

Less well recognized is the occurrence of this type of hyperemia in any part of the nasopharyngeal mucosa, again in varying degree. Such swelling often produces a postnasal drip which, the patient will state, is present only when she is pregnant. Patients who do not have symptomatic congestion ordinarily, will find that when they do get a cold, the symptoms last much longer than those of a cold usually do. Occasionally, this hyperemia is responsible for closure of the medial end of the Eustachian tube; such patients will complain of "plugging" of the ears. Inspection of the ear drum will show a depression which confirms the presence of Eustachian closure rather than wax in the canal which is the patient's diagnosis. Symptoms related to this physiological congestion are more apt to occur in heavier smokers or those who have a history of allergic rhinitis, just as are the symptoms of the common cold. And when the cold does occur in pregnancy, the symptoms are worse because of the underlying congestion.

The pregnant woman with a cold is miserable for other reasons, dependent somewhat on her parity and the length of her gestation. As parity increases, so also does the relaxation of the abdominal and perineal musculature. The uterus, lying against a slack abdominal wall, and bearing down on relaxed perineal muscles, acts like a piston when the patient coughs, sneezes, or even blows her nose, pushing down on the bladder. Stress incontinence during colds is almost the rule.

As the length of gestation increases, so does the size of the uterus. As it grows, it pushes the abdominal contents above it and elevates the diaphragm. This results eventually in a lateral displacement of the lower rib cage, often to a point at which the patient will complain of soreness in this area. If such a

(Concluded on following page)

From a continuing study on nasal congestion...



timed to work while your patient does

A study begun in 1966 by the Department of Otolaryngology, Greater Baltimore Medical Center, has accumulated evidence that documents the effectiveness of Triaminic's timed-release action in the treatment of nasal congestion.

With its balanced formulation of an oral nasal decongestant and two antihistamines, Triaminic effected partial or complete relief in more than 82% of the 85 subjects treated. Clearing nasal obstruction. Reducing turbinate swelling. Making breathing easier.

It's a comforting thing to know that Triaminic really works.

Triaminic® *timed-release tablets*

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50mg.
Pyrilamine maleate	25mg.
Pheniramine maleate	25mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

(Advertisement)

patient has a cold, the coughing and sneezing will exaggerate this soreness. The diaphragmatic restriction caused by the enlarging uterus also makes breathing more difficult, particularly when the patient lies down. A cold compounds this difficulty.

Treating a cold in pregnancy requires two additional considerations. The patient should be told that the symptoms may last longer lest she become discouraged, and she should be reassured that the treatment will not damage the fetus. Although there are still some women who seem blissfully ignorant regarding matters of health (and these need to be cautioned not to take medication recommended by friends), most of our maternity patients are aware of the thalidomide tragedy. These women need constant reassurance that the symptoms of a cold can be treated, and that the medication is safe. Fortunately, many of the drugs which are of benefit have been in use long enough and widely enough so that such a statement can be offered. Occasionally one encounters a patient who is so anxious to avoid medication that she is extremely reluctant to take anything at all. Since cold is self-limited, it seems reasonable enough to give such a patient the choice and not to force drugs on her if she is obviously afraid of taking them.

The most distressing symptom of the common cold is the nasal congestion. This can be mitigated by the use of a decongestant which will help reduce the postnasal drip and the coughing caused by it. The kind of a cough which is described as a "tickling" in the throat and which is apt to occur when the patient goes to bed is usually due to nasopharyngeal congestion rather than inflammation in the lower respiratory tract.

There are many cough mixtures available. Most contain an antihistamine, a decongestant, and a cough "suppressant." Should cough suppression be desirable, it is important to remember not to use both a decongestant tablet and such a cough mixture as the patient would be getting a double dose of the decongestant. With some patients, the placebo effect of a cough syrup may be important and a liquid preparation might be substituted for an oral tablet.

For a sore throat, candy drops or lozenges at frequent intervals are soothing. It is not only unnecessary but unwise to use antibiotic lozenges or drops. The use of antibiotics in an uncomplicated cold is contraindicated and should be scrupulously avoided.

In summary, a cold in pregnancy is more severe and longer lasting. The treatment of the symptoms with local and systemic decongestants will make the patient more comfortable.

Apparently the cold is so common in pregnancy that it has received very little attention in the literature. References are almost non-existent and the few which are available add little to the common knowledge, are out-dated, or are not helpful. Thus the usual bibliography is not appended.



Relieve his sniffles,
her concern, and about
half your phone calls.
Tell her to get
"The Orange Medicine"



Triaminic® syrup

Each teaspoonful (5 ml.) contains:

Phenylpropanolamine hydrochloride	12.5 mg.
Pheniramine maleate	6.25 mg.
Pyrilamine maleate	6.25 mg.

For nasal congestion you can bring quick, lasting comfort to your little patients with Triaminic Syrup. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

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Apply internally.

Take a relaxing break for Coca-Cola. Couple of times a day. Because Coke has the taste you never get tired of. It's always refreshing.



Tissue's healing nicely. Yet anxiety slows his steps toward recovery.

By helping overcome anxiety and tension which can thwart the convalescent's progress, Equanil® often may play an important role in medical and surgical aftercare.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

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Equanil®

(meprobamate)

Wyeth

Professionally posed.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.



a stuffy nose is no laughing matter

Ornade® Trademark

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

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brand of sustained release capsules

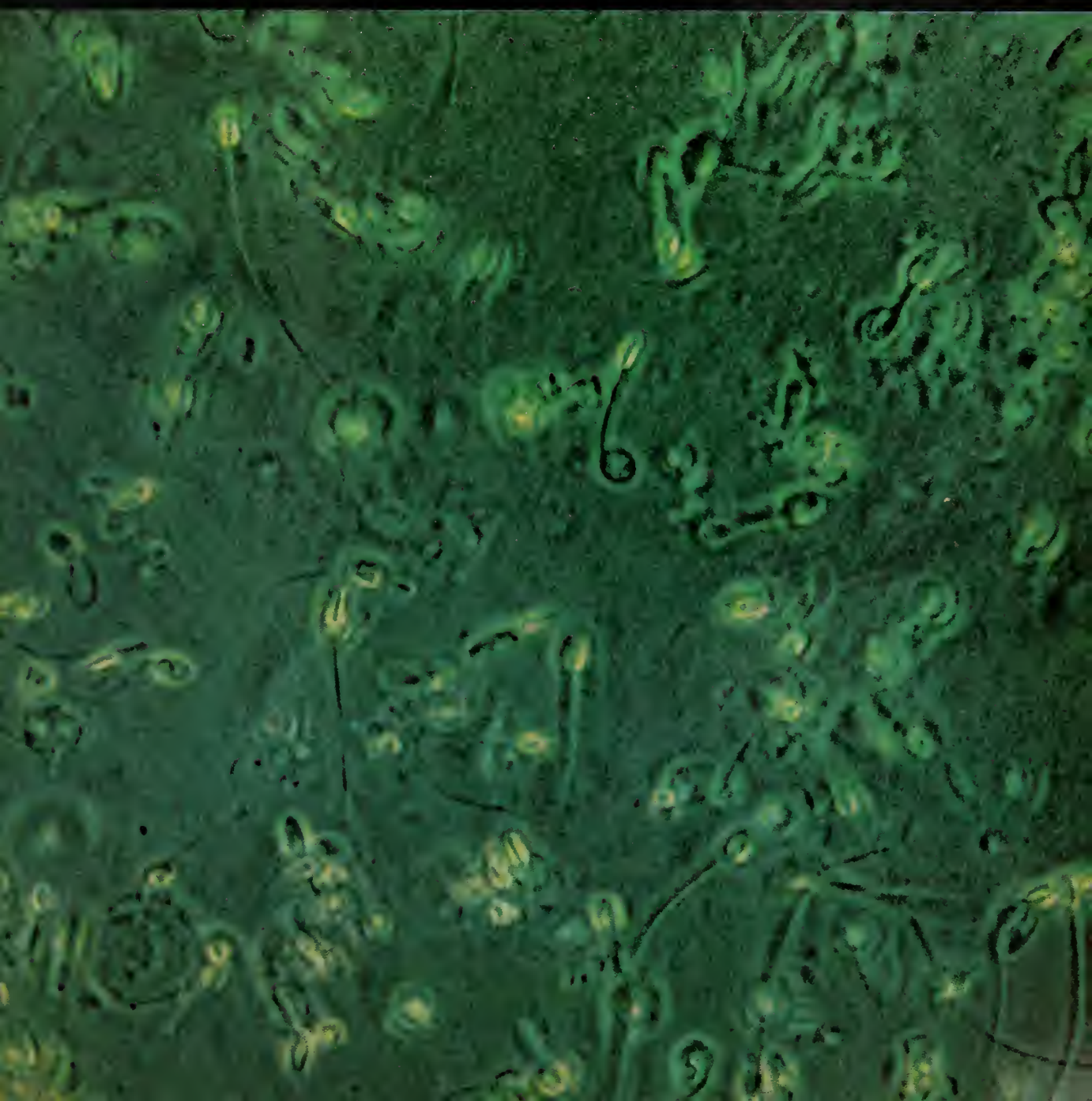
each one can give him all-day or all-night relief of nasal congestion

SK&F Smith Kline & French Laboratories

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg. & mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



eduction of oral contraceptive
osage to the lowest effective levels is
well-accepted principle of conserva-
ve medical practice. In keeping with
is view, Norinyl is now also avail-
ble as Norinyl-1, containing exactly
ne half the previous dosage of
orethindrone and mestranol. Clinical
xperience has established that effec-
ve fertility control can be achieved
ith the same degree of reliability
nd safety with new Norinyl-1 when
ken as directed.

**Vhat about switching patients from
gher dosage forms?**

transferring patients to low-dose
orinyl-1 from higher-dosage oral
ntraceptives, some breakthrough
eeding may occur in the early
cles. In the majority of cases the
eeding episode is mild and self-
nited. The long-term advantages of
e lower dosage form should be
eighed against the inconvenience of
ossible breakthrough bleeding in
e individual patient.

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of NORINYL-1 (norethindrone 1 mg. with mestranol 0.05 mg.) in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with NORINYL-1. Therefore, if such tests are abnormal in a patient taking NORINYL-1 it is recommended that they be repeated after the drug has been withdrawn for two months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibromyomata may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. 5. NORINYL-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, and as in all cases of irregular bleeding *per vaginam*, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged NORINYL-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving NORINYL-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. 11. Because of the effects of estrogens on epiphyseal closure, NORINYL-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with NORINYL-1 may mask the onset of the climacteric. 13. The pathologist should be advised of NORINYL-1 therapy when relevant specimens are submitted.

Side effects observed in patients receiving oral contraceptives: The following adverse reactions have been observed in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression.

Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation post-treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, itching.

The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has been neither established nor disproved): thrombophlebitis, pulmonary embolism, neuro-ocular lesions.

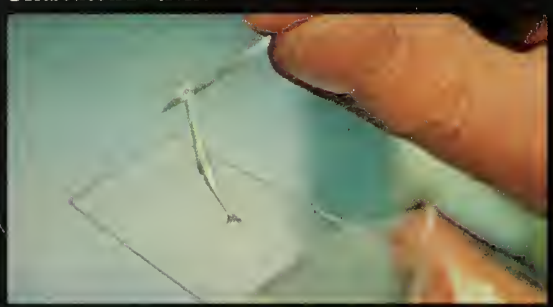
The following laboratory results may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, Factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

norethindrone — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

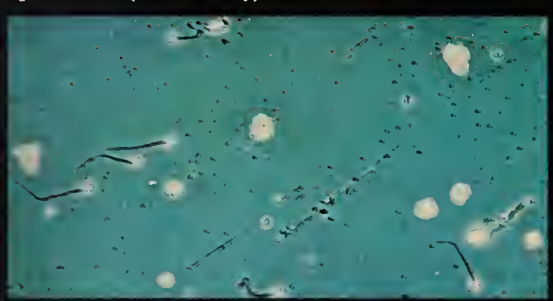
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

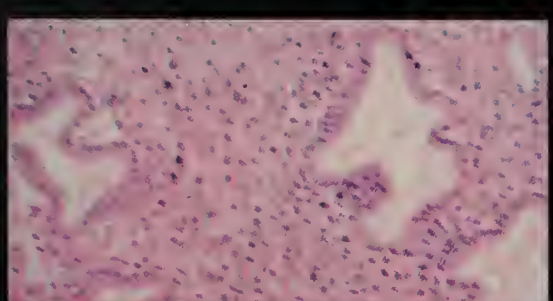
Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.

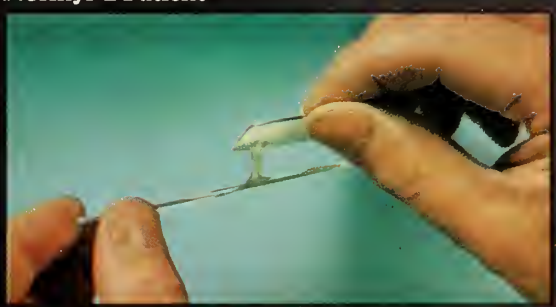


Spermatozoa appear healthy, active, freemoving.

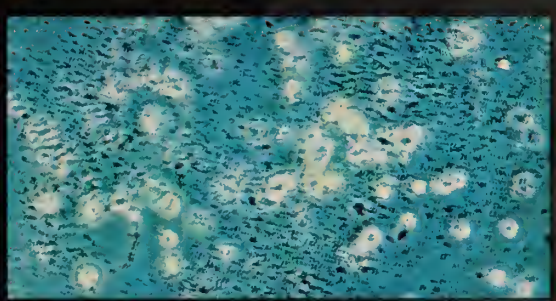


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

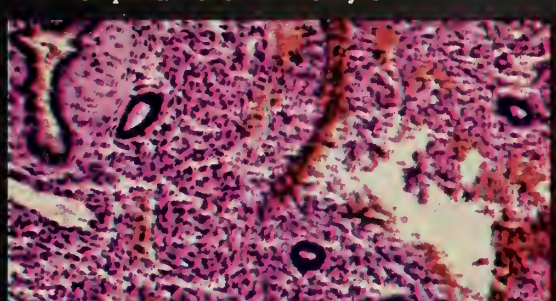
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

Norinyl®-1
(norethindrone 1mg. & mestranol 0.05mg.) tablets

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost

An uncommon steroid for common inflammatory dermatoses

In everyday topical steroid therapy, Synalar produces rapid resolution of inflammation and itching in steroid-responsive dermatoses—and at relatively low cost to the patient.

Advanced molecular design enhances potency

Synalar combines the advantage of earlier corticosteroid compounds with unique structural innovations. As a result, preparations of Synalar 0.01% and Synalar 0.025% have been reported to be more potent topically and significantly more effective than hydrocortisone 1.0%. The unique fluocinolone acetonide molecule provides one of the most useful topical corticosteroids for everyday practice.

Impressive clinical results in a wide range of dermatologic problems

The clinical efficacy of Synalar has been extensively documented in the world literature. Commonly encountered diseases such as allergic and contact dermatitis, eczematous and seborrheic dermatitis, and neurodermatitis respond rapidly to Synalar, often where previous therapy with other topical corticosteroids has failed.

Low patient cost for wider usefulness

With Synalar, a high degree of efficacy does not mean high price. And—a small quantity goes a long way. Thus, your patients can often obtain the "economy" of a hydrocortisone preparation with the proved efficacy of a potent, truly advanced steroid.

Synalar®
fluocinolone acetonide





Turn page for contraindications, precautions and side effec

For everyday topical steroid therapy

Synalar® 0.01%

fluocinolone acetonide provides economy in two practical dosage forms

For general use, the most economical and widely applicable concentration of Synalar is 0.01% Cream in a water-washable, vanishing cream base. Synalar Solution 0.01% is especially valuable in dermatoses involving moist, intertriginous areas or hairy sites where creams and ointments do not spread or penetrate readily. Synalar Solution is a unique dosage form—clear, nongreasy, cosmetically elegant.

Product Information

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. *Precautions:* Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. *Side Effects:* Side effects are uncommon with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. In such cases the agent should be discontinued and appropriate measures taken. *Availability:* Synalar (fluocinolone acetonide) Cream 0.025%—5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01%—15, 45 and 60 Gm. tubes and 120 Gm. jars. Solution 0.01%—20 and 60 cc. plastic squeeze bottles. Ointment 0.025%—15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream—5, 15 and 60 Gm. tubes.

fluocinolone acetonide—an original steroid from

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LABORATORIES INC., PALO ALTO, CALIF.





"Yes, Doctor, the pain is gone."

'EMPIRIN'® COMPOUND with CODEINE PHOSPHATE gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

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Nothing else I've tried seems to work, so I decided to give you a crack at it.

Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

And let you control the dosage.

With Novahistine LP tablets and Novahistine Singlet tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever.

Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.

Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg., and acetaminophen, 500 mg



DOW PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS



Tandearil®, oxyphenbutazone, 100 mg. tablets

Indications: Osteoarthritis, rheumatoid arthritis, rheumatoid spondylitis, psoriatic arthritis, gout, painful shoulder (peritendinitis, capsulitis, bursitis and acute arthritis of that joint), acute superficial thrombophlebitis, severe forms of a variety of local inflammatory conditions. (In inflammatory conditions not involving prolonged or fatal disease, use only when severity of condition balances potential toxicity.)
The drug has no significant uricosuric action but is of value only in the treatment of acute gouty arthritis.
Contraindications: Edema; danger of cardiac decompensation, history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.
Warning: Tandearil is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.
Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make regular blood counts. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The most common are nausea, edema and drug rash. Swelling of the ankles or face may be minimized by with-

"Pain Break" for an osteoarthritic. Tandearil can ease it.

At 46, her knees still look good on the outside. But inside, there may be the familiar picture of osteoarthritis.



If aspirin doesn't help, Tandearil often will. Pain and stiffness begin to ease up in 3 or 4 days. You can often maintain response with a daily dose of only 1 or 2 tablets.

Of course, Tandearil is not for every osteoarthritic. Select your patients carefully and follow them in line with the Contraindications, Precautions, Warning, and Adverse Reactions listed below.

But for many aspirin-stubborn osteoarthritics, let Tandearil ease the unwelcome pain breaks of osteoarthritis.

Tandearil®
oxyphenbutazone

holding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

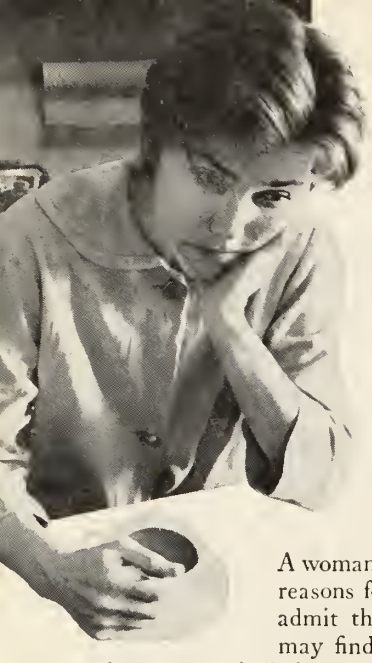
Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. It is usually unnecessary to exceed 4 tablets daily. A trial period of 1 week is adequate to determine response; in the absence of a favorable response, discontinue. Maintenance: An effective level is often achieved with 1 or 2 tablets daily, do not exceed 4 daily. 6562-VI(B)R2

For complete details, please see full prescribing information.

Geigy

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

TA-5806



Tears without grief

Crying Spells–psychic tension with depressive symptoms?
"I don't know what's the matter with me lately...I cry and I cry... and I really don't know why I do."

A woman often is not conscious of the real reasons for her crying spells or refuses to admit them to herself. On probing, you may find that frequent weeping, like insomnia or neurotic fatigue, often is an expression of psychic tension. She needs sympathy and reassurance, and perhaps a calming agent to help her over her crisis. Consider prescribing Valium (diazepam) for her. It usually reestablishes calmness promptly. Crying spells and other secondary depressive symptoms normally subside as the tension is relieved. Your patient then can cope more easily with stresses to which she is subjected. Valium (diazepam) is generally well tolerated, and on proper mainteenance dosage usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

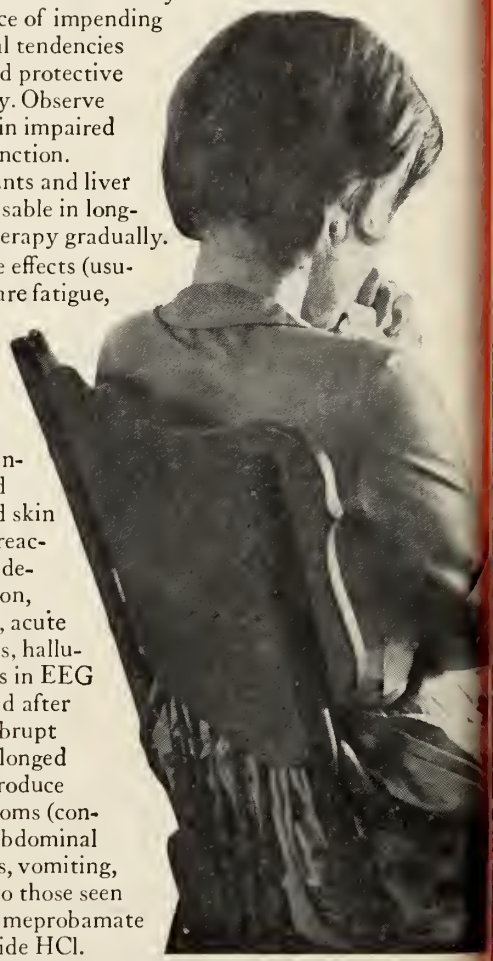


Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects–particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.



Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage: *Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions.)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories, Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



Valium® (diazepam) Roche®

useful for the relief of psychic tension with associated depressive symptoms

1968 Annual Session
The Samoset, Rockland
June 9, 10, 11

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of
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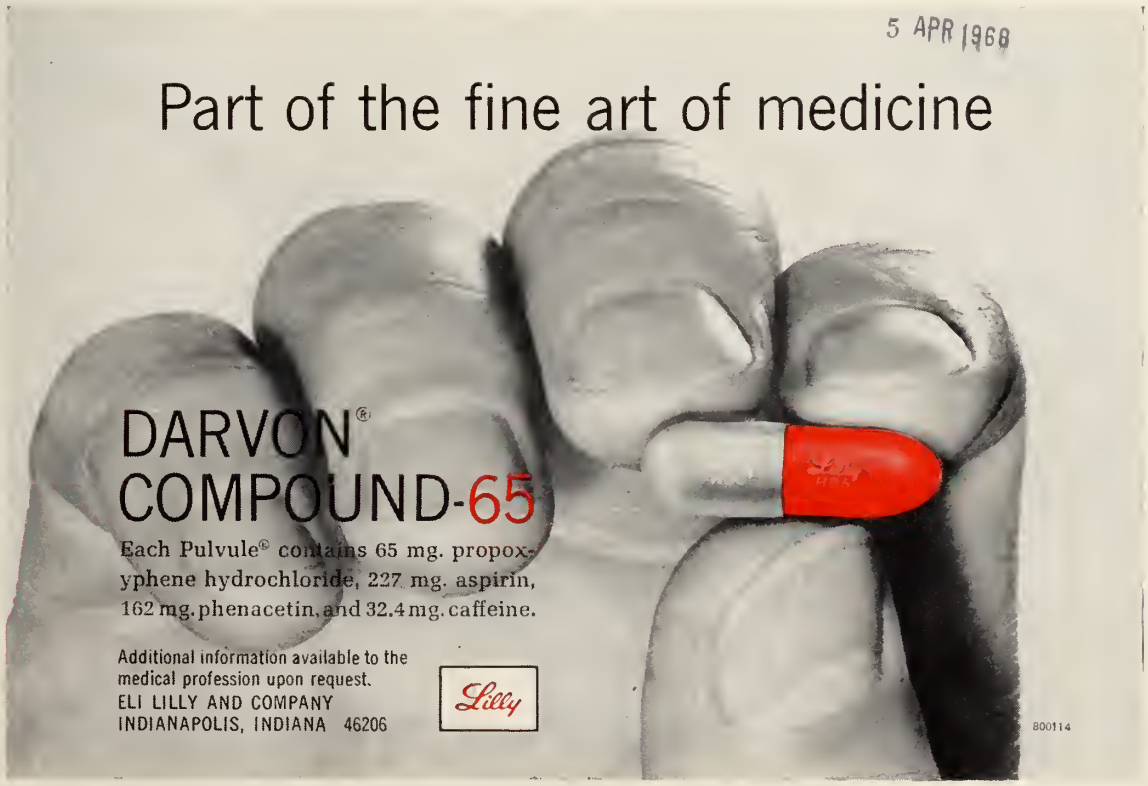
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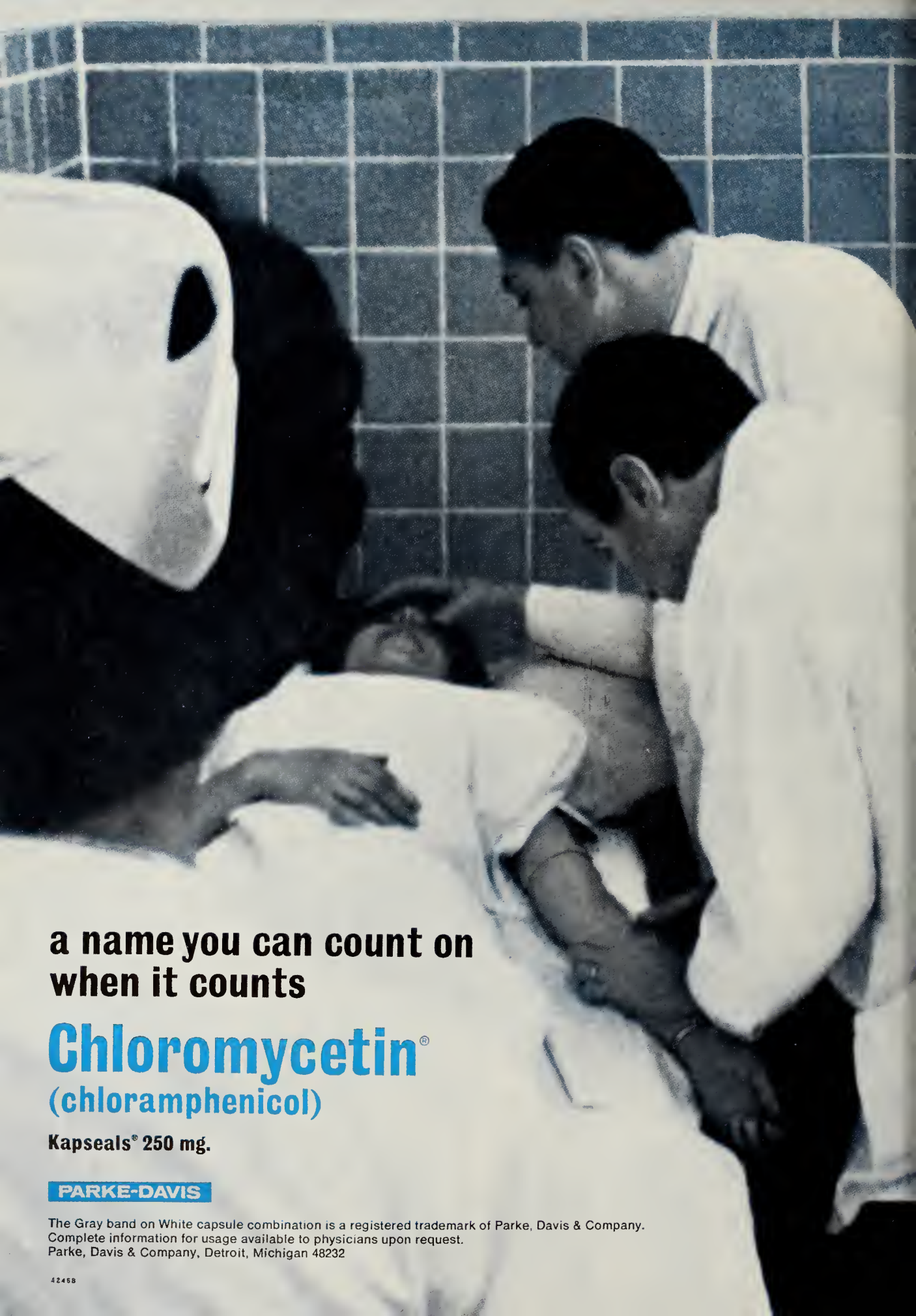
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(chloramphenicol)

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IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.



(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. BALTIMORE, MARYLAND 21201

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b.i.d.

The sensible schedule that covers the patient day and night

If your objective in the use of a broad-spectrum antibiotic is prolonged action, with high blood levels, then you know why b.i.d. DECLOMYCIN is considered to be a sensible dosage schedule.

The maintenance dosage of DECLOMYCIN can be kept at this convenient schedule because of its unusually high effective blood and tissue levels.

The b.i.d. dosage of DECLOMYCIN gives you the comfortable assurance that the patient is well-covered, *day and night*.

In clinical practice, blood levels produced by a therapeutic dose of DECLOMYCIN are high, prolonged, and effective; because of high serum binding and slow renal clearance. And if there's a broader susceptibility pattern of organisms, we've yet to see it.

There is no need to give higher daily dosage than 300 mg b.i.d., except in venereal diseases and Eaton Agent pneumonia.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

Lederle

Prescribing information on next page.

b.i.d. The sensible schedule that covers the patient day and night

DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines when the offending organisms are tetracycline-sensitive.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occure. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth— dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg. of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg. every 6 hours for a minimum of 4 doses or 300 mg. every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg. every 6 hours or 300 mg. every 12 hours until a cure is effected.

Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg. in 3 divided doses for six days.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, N.Y.

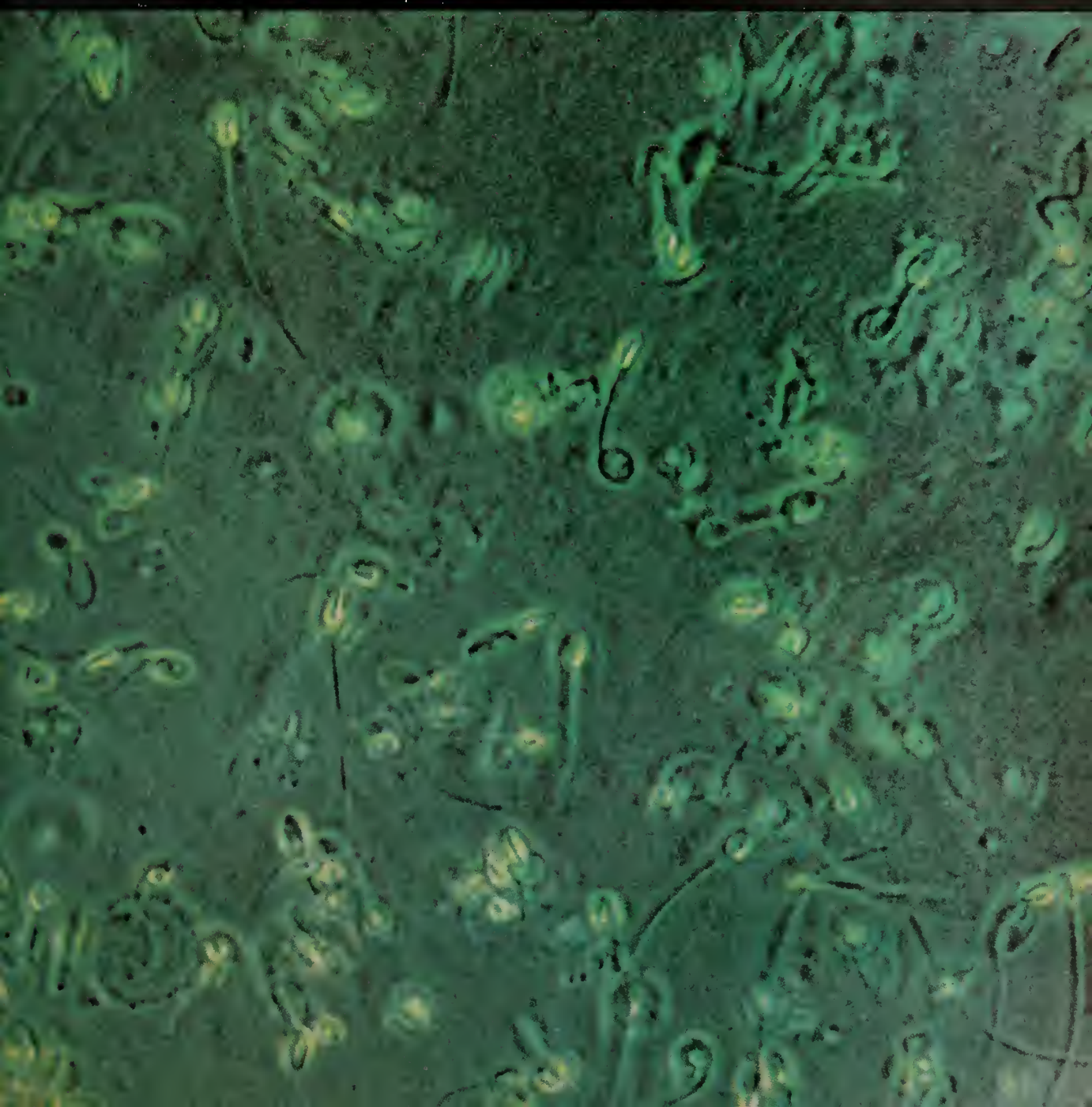
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491-7—6046

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg. & mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of NORINYL-1 (norethindrone 1 mg. with mestranol 0.05 mg.) in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with NORINYL-1. Therefore, if such tests are abnormal in a patient taking NORINYL-1 it is recommended that they be repeated after the drug has been withdrawn for two months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibromyomata may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. 5. NORINYL-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, and as in all cases of irregular bleeding *per vaginam*, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged NORINYL-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving NORINYL-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. 11. Because of the effects of estrogens on epiphyseal closure, NORINYL-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with NORINYL-1 may mask the onset of the climacteric. 13. The pathologist should be advised of NORINYL-1 therapy when relevant specimens are submitted.

Side effects observed in patients receiving oral contraceptives: The following adverse reactions have been observed in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression.

Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation post-treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, itching.

The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has been neither established nor disproved): thrombophlebitis, pulmonary embolism, neuro-ocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, Factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

norethindrone — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

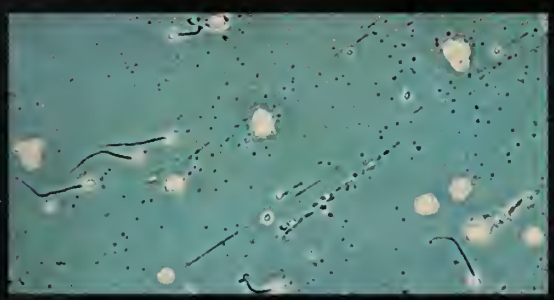
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

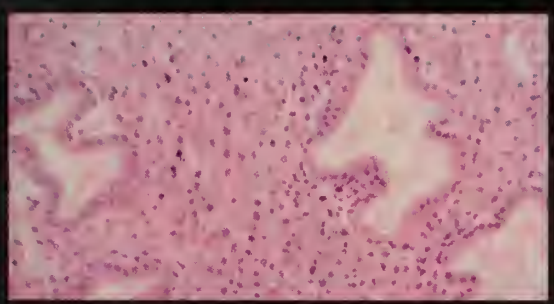
Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.



Spermatozoa appear healthy, active, freemoving.

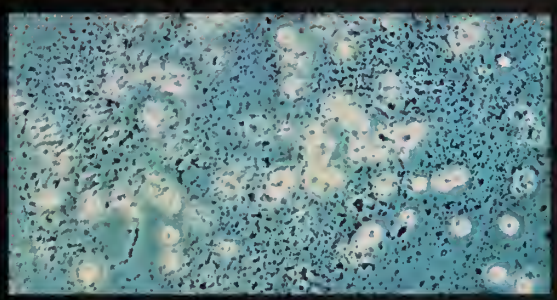


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

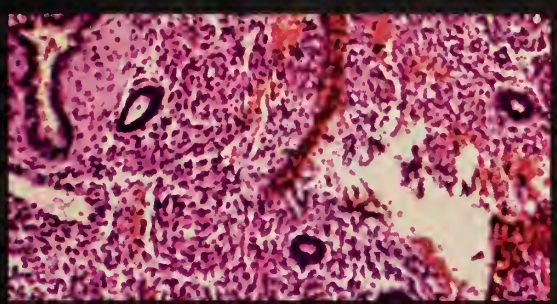
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

Norinyl®-1
(norethindrone 1mg. c mestranol 0.05mg.) tablets

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost

Night Leg Cramps . . . Unwelcome Bedfellow

In Diabetes[1], Arthritis[2], and Peripheral Vascular Disorders[2]



now . . . specific therapy for night leg cramps

Walker

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Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

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PHILADELPHIA, PENNSYLVANIA 19144

Prescribing Information: Composition: Each white, beveled, compressed tablet contains: Quinine Sulfate 260 mg. and Aminophylline 195 mg. **Contraindication:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

References: 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angiology, 12:102, 1961. 3. Rowls, W., et al.: Med. Times, 87:818, 1959.

6/67 Q-706A

A BLUE SHIELD REPORT to DOCTORS



REPORT # 11

Service Benefit Member With Major Medical

Article 11, Section (1) C, of the Blue Shield contract indicates that a member is automatically removed from the Service Benefit classification when additional benefits are received from another source.

"Another source" would not include a major medical contract since such a contract requires both deductible and co-insurance payments. Such out-of-pocket expenses to an under-income subscriber would defeat the very intent of Blue Shield's service concept.

Consequently, if all the provisions of Article 11 have been met, a participating physician should be accepting our payment without additional charge to the patient even though the subscriber also has a major medical contract.

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Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of Tofrānil and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before Tofrānil may be substituted. Initial Tofrānil dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when Tofrānil was added to the regimen.
Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 yea of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, disturbances of accommodation, sweating, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and disorientation), activation of psychosis i schizophrenics and agitation (includ-

When a milestone in life is marred by depression...



Often in the mind of the lonely, widowed, depression-prone individual, she's not gaining a daughter...she's losing a son. The occasion may be marred by such symptoms of depression as feelings of sadness, incapacity, helplessness and hopelessness.

In about 3 out of 4 cases, Tofrānil relieves symptoms of primary depression.

As maintenance therapy in primary depressive illness, it helps prevent relapse.

Although toxic reactions severe enough to require discontinuation of Tofrānil are uncommon, in patients with cardiovascular disease, thyroid disorders, increased intraocular pressure, or in those receiving anticholinergics (including antiparkinsonism agents), the special precautions listed in the Prescribing Information should be carefully observed. The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated.

Tofrānil® imipramine hydrochloride
Geigy

pomanic and manic episodes) may require dosage reduction r addition of a tranquilizer or rary discontinuation of the drug, tiform seizures, orthostatic ension and substantial blood ure fall in hypertensive patients, ra, transient jaundice, bone marepression including agranulocysensitization and skin rash ling photosensitization, eosinoand mild withdrawal symptoms dden discontinuation after prod treatment with high doses. ional hormonal effects (imce, decreased libido, and estroeffects) may be observed. ne-like effects may be more unced (e.g. paralytic ileus) in otible patients and in those anticholinergic agents (includtiparkinsonism drugs).
tient Adult Dosage: Initially, . daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Tofrānil: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)46-850-C
For complete details, please refer to the full Prescribing Information.

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Division of Geigy Chemical Corporation
Ardsley, New York 10502



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Not entirely, when nausea and vomiting occur in early pregnancy. Emetrol offers prompt and safe relief. Local rather than systemic action provides emesis control on contact with the hyperactive G.I. tract.* In a study of 123 pregnant women, the drug produced measurable improvement in 79% of patients in controlling vomiting.[1]

*As shown by *in vitro* studies.
1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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phosphorated carbohydrate solution
emesis control

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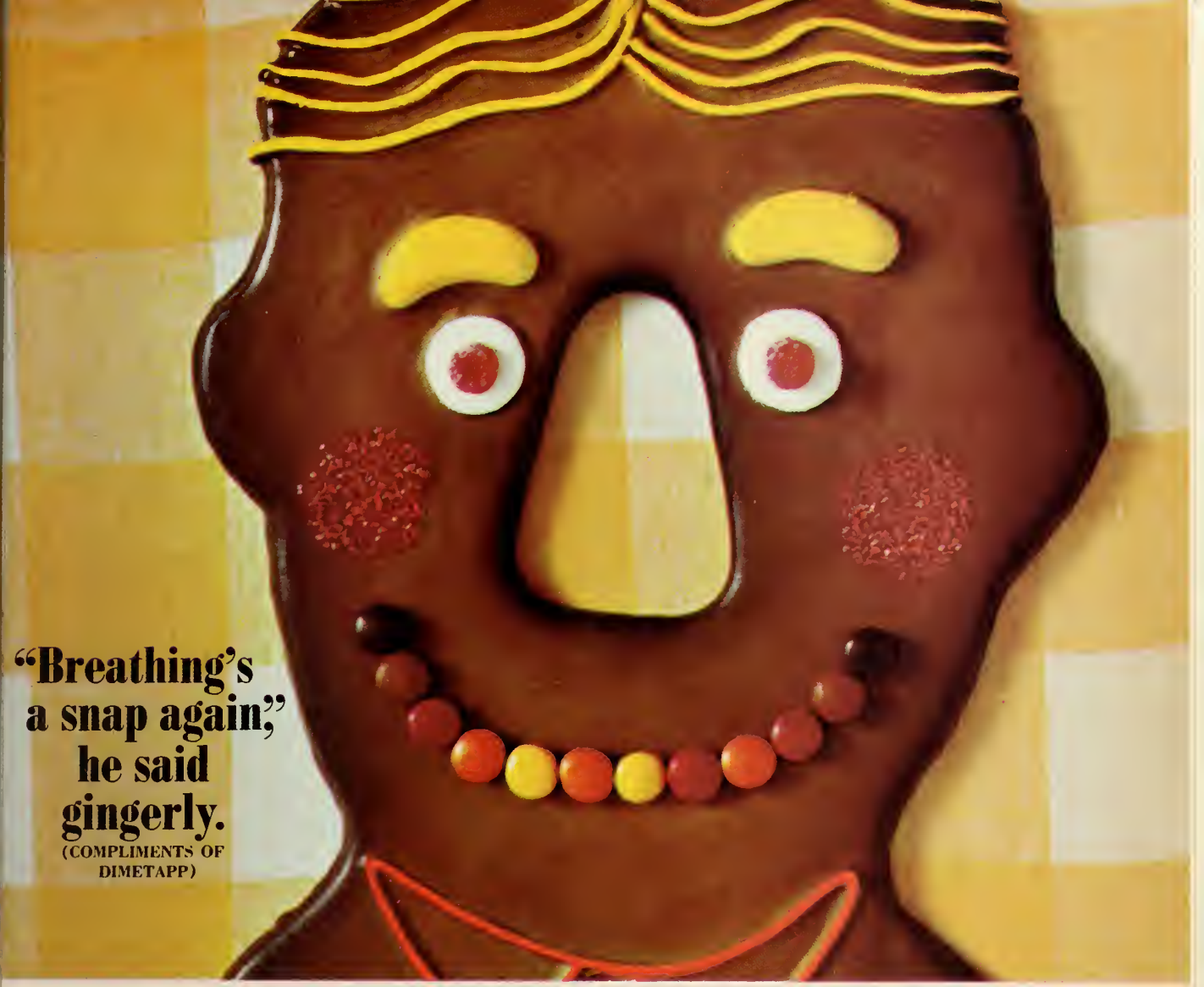
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Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

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in sinusitis, colds, U.R.I.

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

up to 10-12 hours clear breathing on one tablet



If hypothyroidism leaves your patient feeling like this...

consider

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Synthetic Thyroid Replacement Therapy



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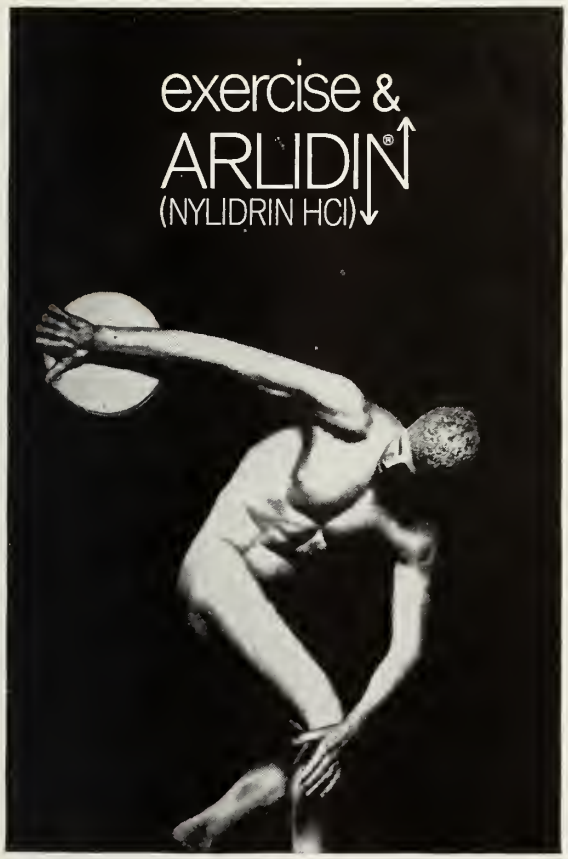
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Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

ARMOUR PHARMACEUTICAL COMPANY • CHICAGO, ILLINOIS



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Make tuberculin testing routine with every physical examination.



TUBERCULIN,TINE TEST
(Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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330—8/6135

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Pro-Banthīne-induced duodenal calm permits full anatomic appraisal: Same patient. Duodenal normality is now evident.



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- **in treatment**

Pro-Banthine® brand of propantheline bromide

calms the gastrointestinal tract

For fifteen years Pro-Banthine has been the most widely used anticholinergic agent in disorders of gastrointestinal motility and gastric hypersecretion. More recently Pro-Banthine has reestablished its pharmacologic effectiveness in diagnostic procedures using intragastric fibroscopy and hypotonic roentgenography.

How the X-rays were taken

In the hypotonic duodenograph[1,2] reproduced above, the gastrointestinal tract was relaxed with Pro-Banthine. The duodenum was intubated. Pro-Banthine in a dose of 60 mg. intramuscularly was used to assure prompt aperistalsis and double-contrast visualization was achieved with ordinary barium and air.

The same pharmacologic efficiency has proved of pronounced value in such conditions as: *peptic ulcer, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.*

Contraindications: Glaucoma or severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly males with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

(1) Bilbao, M. K.; Frische, L. H.; Rösch, J., and Dotter, C. T.: Hypotonic Duodenography, Scientific Exhibit, Radiological Society of North America, Chicago, Nov. 27–Dec. 2, 1966.

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Burdock Ophthalmia

RALPH A. GOODWIN, JR., M.D.*

In the early fifties I described several cases of "thorn-type" foreign bodies. These cases were not published because neither through history or through the local pathology department or through the local biology department was the offending agent identified. The picture was not that of ophthalmia nodosum described by Dr. Gundersen nor did it seem to be included in Fuchs's section on "Foreign Bodies in the Conjunctival."

Fuchs states that "small, sharp-pointed foreign bodies penetrate into the conjunctiva, and may remain there a long time. This is particularly true of powder grains and little particles of lead or stone thrown into the eye by an explosion. Foreign bodies of this sort remain fixed in the conjunctiva of the eyeball without giving rise to any further irritation, and may therefore be left in situ. They can be removed if necessary by cutting them out along with the conjunctiva in which they are embedded. Larger-sized foreign bodies are retained in the conjunctival sac only when they get into the upper retrotarsal fold. In this spot they stay, remaining still even during the act of winking, cause no irritation of the cornea, and therefore produce at first but little trouble. After some time has elapsed, they begin to excite the symptoms of chronic conjunctival catarrh and ultimately may produce a circumscribed purulent inflammation with the formation of ulcers and cockscomb-like proliferations. If the lid is everted, this hypertrophied part of the fornix protrudes and with it the foreign body, which previously had lain hidden from view, but now can readily be removed with a forceps.

"By the entrance of caterpillar hairs or of plant hairs into the conjunctival sac, acute inflammations of the conjunctiva develop often with the formation of small nodules in the conjunctiva enclosing the hairs."

The type of foreign body described is unusual in that because it is embedded vertically in the conjunctiva it will produce damage to the cornea before the ulcers or nodules described by Fuchs are formed. In cases of a few days duration, the hypertrophy of the fornix may be sufficient to make localization of the foreign body very difficult.

In 1955 after reading the article by Dr. William H. Havener it was realized that these cases of "thorn-type" foreign body fit the description of burdock ophthalmia. The picture was again described beautifully by Drs. Breed and Kuwabara in 1966.

The burdock belongs to the family Compositae genus Arctium, species lappa and minus. Both species have spread widely as weeds over the continental U.S. and Canada and are natives of Europe and Asia. Arctium minus is the smaller and its burs stick to clothing or to animals. The bur is composed of hooked bristles which may embed commonly in the conjunctiva.



Fig. 1
Low Power



Fig. 2
High Power

Figs. 1 and 2. Photomicrographs of multibarbed needle-like shafts removed from patients. (These are not the single hooked hair-like shafts from the outer layers of the burdock; the shafts causing the lesion are attached to the seed pods. Breed)

Several times each year patients appear in my office and are found to have a burdock embedded in either upper or lower tarsus, most commonly the upper tarsus or upper conjunctival fornix. These patients complain of foreign body sensation in the eye. Slit-lamp examinations show very fine superficial corneal abrasions that are almost typical of burdock ophthalmia. These multiple fine corneal scratches nearly always will indicate by their location the site of the offending bristle. For example, by the location of the abrasion it is determined usually whether the upper or lower lid is involved and whether the temporal, central or nasal aspect. Typically the

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"thorn-like" foreign bodies are embedded vertically in the upper fornix and are found only upon extreme eversion of the lid under the slit-lamp microscope magnification. The tip is usually protruding and is grasped with fine splinter forceps and removed.

Most of the patients seen offer no history of contact with the burdock but when questioned have no hesitation in recalling the association. Many patients are children who have had burdocks in their clothing. One of the adult patients was a house painter who had encountered burdocks among shrubs about a foundation and the last adult patient recalled she had run into a burdock plant when riding on the snow in a "SkiDoo."

Of the cases seen in my office, there has been only one of such severity that there was danger to the eye. This occurred in 1956 in a six-year-old child. There was a good deal of severe secondary infection and such marked lid swelling and chemosis that the patient required hospitalization. After the severe infection had been controlled with local and systemic antibiotics, 11 days later a rather deep corneal ulcer was found to have healed. On the 14th day there were still scratches in the upper third of the cornea and it was at this time after the swelling had subsided that the typical burdock foreign body was removed under the slit-lamp with splinter forceps. The sharp end of this cocklebur shaft constantly irritated the cornea producing at first an abrasion and later the resulting ulcer. The severe conjunctival and lid reaction was likely due to the toxic water-soluble glycoside irritant in the burdock plant, described by Havener.

Occasionally the foreign body is not found at the first examination even though the typical clinical picture is in evidence. It is felt that in these patients the shaft has buried itself and on a return visit, usually the next day, the tip is seen and splinter forceps are used to relieve the situation.

ACKNOWLEDGEMENT

Photomicrographs through the courtesy of Ronald S. Potts, M.D., Pathologist, Central Maine General Hospital, Lewiston, Maine 04240

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State Of Maine

Department of Health and Welfare

DEAN H. FISHER, M.D.
COMMISSIONER

Maine's First Community Mental Health Center

JOHN B. LEET*

With the dedication of Maine's first Community Mental Health Center located at 106 Campus Avenue, Lewiston, a milestone has been reached in the implementation of Maine's Mental Health Plan. This comprehensive Center has been constructed with matching funds from the community and the federal government under the Community Mental Health Center Survey and Construction Plan, which is a part of Maine's Mental Health Plan. This document developed by the Department of Mental Health and Corrections and approved by the Advisory Committee on Mental Health was the first in the six New England states to win the approval of the National Institute of Mental Health.

Many years of planning and effort by people dedicated to the care and treatment of the mentally ill in Maine established a solid foundation for Maine's overall Mental Health Plan. The 99th Legislature enacted laws to expand the care and treatment of the mentally ill by: 1) Changing the name of the department from Institutional Services to the Department of Mental Health and Corrections. 2) Providing within the Department a Bureau of Mental Health. 3) Appropriating funds to hire a Director of the Bureau of Mental Health. 4) Providing funds for community mental health services. 5) Establishing a committee on mental health to assist in carrying out the purposes of the Bureau of Mental Health. It is this Advisory Committee, including several serving from the original committee, on whom the responsibility for carrying out the comprehensive mental health plan for the State of Maine has fallen. They have served as a citizen sounding board for contemplated policy and program changes and as a liaison with the legislative and executive branches of government. Not only have they promoted these programs from their infancy but have been the chief stimulators of new ideas.

In June, 1963, William E. Schumacher, M.D., Director of the Bureau of Mental Health, submitted a proposal for "Planning a Comprehensive Mental Health Program for Maine" to the United States Department of Health, Education, and Welfare. Based on this proposal Federal funds were allocated to organize planning activities for the year 1963-1964. A second-year grant was made available for the same purpose. As in the rest of the United States, at that time Maine was in the process of broadening and changing its action for mental health from a hospital centered base to a community centered base. "Community" for much of Maine and the rest of the United States presently means a population center of a defined area. Maine's Mental Health plan established five such areas.



As one of the first steps taken to carry out the recommendations of the Mental Health Plan for Maine, the staffs of the Androscoggin Mental Health Clinic and the Child and Family Services in Lewiston were integrated and on October 3, 1966, became known as the Child and Family Mental Health Services; subsequently, the Child and Family Mental Health Center. Professional services were increased not only in quantity but quality as well. On November 7, 1966, the Area IV Mental Health Advisory Board was formed including representatives from boards of the satellite clinics in Oxford and Franklin counties. It has met regularly and developed an areawide application for federal staffing funds. The application for $110,000, approved by the National Institute of Mental Health, became effective November 1, 1967, and assured the center of adequate professionally

*Deputy Director, Bureau of Mental Health, Department of Mental Health and Corrections.

trained personnel. The board is also assisting the Oxford and Franklin County clinics in developing professional services and coordinating activities with the center.

Construction of the new mental health center on Campus Avenue near St. Mary's Hospital in Lewiston commenced in December, 1966, and was completed in the fall of 1967. The local share of the construction funds was pledged by pastors of the Catholic parishes of Lewiston-Auburn and the National Institute of Mental Health provided the matching share of 58%. Financial resources for the operation of this center are the Lewiston-Auburn United Fund, the school departments of Lewiston-Auburn, the Androscoggin County Commission, the State Bureau of Mental Health, and the National Institute of Mental Health.

Maine's concept of a mental health center is based upon a complex of facilities and services not necessarily under one roof or even under a single sponsorship is justified in the operation of this comprehensive mental health center. All of the mental health facilities in Androscoggin, Oxford, and Franklin counties are tied together to offer services to all the people of Area IV.

A great deal of credit must be given to agencies working within the Lewiston-Auburn communities who were willing to cooperate toward such a merger. With some services under one roof, as a general hospital with a psychiatric section and rehabilitation facilities, and others under separate direction, such as an adult outpatient clinic and a center for discharged hospital patients, close coordination is particularly important. While the leadership of a strong agency is desirable in planning for a comprehensive center, no one type of service can dominate to the detriment of other services essential to the care of mentally ill patients.

It is expected that using Area IV's Mental Health Center as a model, the other areas in Maine's Mental Health Plan will gather together several mental health facilities functioning under different auspices and affiliate them to provide at least the five essential elements of service required for Federal assistance: Inpatient Services; Outpatient Services; Emergency Services; Partial Hospitalization; and Consultation and Education.

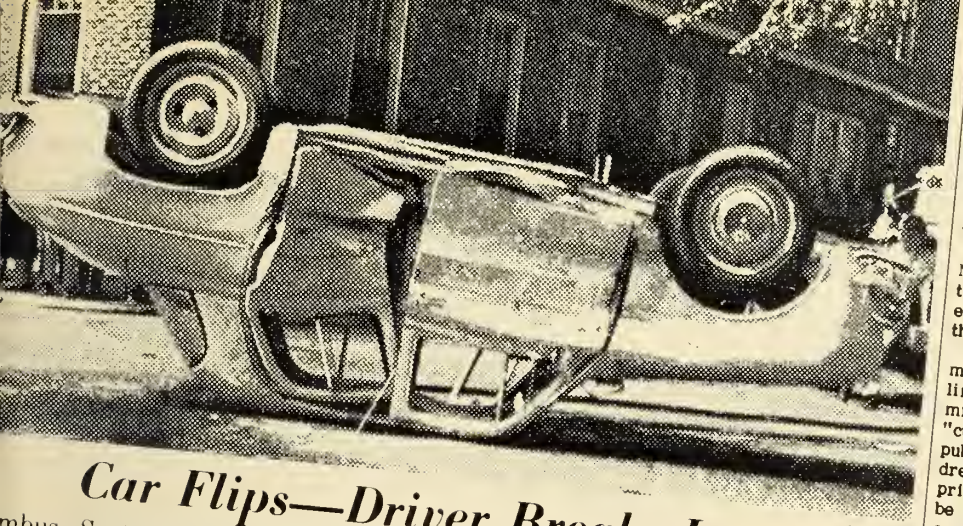
The Area Boards will play an important part in providing guidelines for movement of patients in and among the various services to gain the advantages offered by a single Center. They must clearly define the total range of services and who is to do what within them. Such direction is essential to assuring continuity of care, one of the major objectives of such a program.

As a first – the State of Maine and its people are extremely proud of the way communities have joined together to provide the essential elements of mental health services to the people of Androscoggin, Franklin, and Oxford counties.

ANNUAL MEETING DATES FOR YOUR 1968 CALENDAR

Maine Medical Association, June 9-11, 1968 at The Samoset, Rockland, Maine

American Medical Association, June 16-20, 1968, San Francisco, California



Car Flips—Driver Breaks Leg

mbus, Sept. 7. John P. Jones of
s Lan incurred a broken leg today
driving

Patrolman B. R. Brown, the car hit a fire hydrant and flipped over on its top
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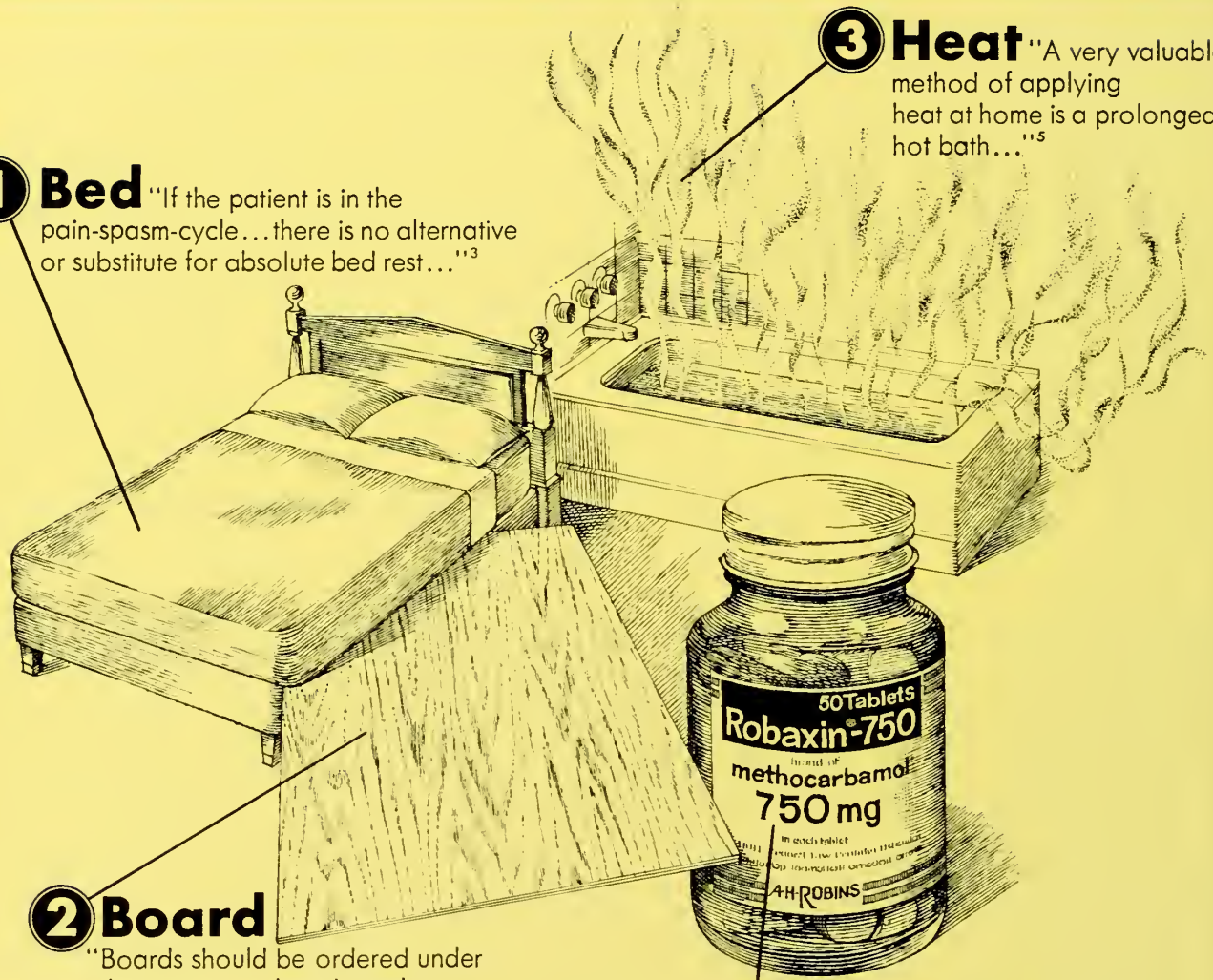
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The low back pain that is most frequently seen in general practice is mechanical in nature, i.e., postural back pain, joint dysfunction and acute back strain.[1,2] For this type of discomfort, a conservative regimen is usually sufficient to relieve aches and pains, and to help keep the patient functioning. Components of this basic program include:

1 Bed "If the patient is in the pain-spasm-cycle...there is no alternative or substitute for absolute bed rest..."[3]

2 Board "Boards should be ordered under the mattress...these boards act by immobilizing the spine..."[4]

3 Heat "A very valuable method of applying heat at home is a prolonged hot bath..."[5]



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Across The Desk

"Health in America"

The President called for:

1. A sharp reduction in infant mortality;
2. Programs to relieve the shortage of physicians and other health personnel;
3. Control of the cost of medical care and better use of present health resources;
4. Reduction of accidental deaths;
5. Launching of "a nation-wide volunteer effort to improve the health of all Americans."

To implement these and other goals, the President asked for:

1. Increased appropriations for maternal and child health care programs;
2. Establishment of a new center for population and human reproduction studies and increased funds for birth control programs;
3. The extension and expansion of the Health Education Act, Nurse Training Act, Health Personnel Training Act, Health Research Act, and Graduate Health Training Act by increasing federal aid to schools and students.

Health Care Costs

President Johnson called for the development of incentives to *reduce health care costs* through the prevention of unnecessary hospitalization and for a testing of incentive plans to control hospital costs and charges. Also requested is the establishment of a reasonable cost range for drugs in federally supported programs, and a drug compendium to be prepared by HEW.

Accident Prevention

Turning to accident prevention, the Secretaries of Transportation, HEW and Defense were directed to assist states and communities in the development of appropriate emergency and rescue plans. The President also established a President's Council on Physical Fitness and Sports to develop national goals and programs to promote sports and fitness. In closing his message, the President called upon state and local governments and private enterprise, to undertake an extensive 12 point voluntary program to build "a healthier America."

Implementing Legislation

Rep. Harley O. Staggers (D) W. Va., introduced in the House, and Sen. Lister Hill (D) Ala., introduced in the Senate, bills which would implement portions of the recommendations of the President which were contained in his health message. H.R. 15757 (S. 3095), *Health Manpower Act of 1968,* (which extends the Health Professions Educational Assistance Act for four years, and would provide for grants for the construction of facilities, education and improvement, and student assistance. The bill also extends for four years: The Nurse Training Act; the Allied Health Professions Personnel Training Act; the Graduate Public Health Training Act; and the Health Research Facilities Construction Act. H.R. 15758, *Regional Medical Programs,* extends for five years the regional medical programs but does not provide for construction funds. H.R. 15758 also extends for two years the program of grants for health clinics for migrant workers and includes a provision which would authorize the treatment of alcoholics and narcotic addicts in community mental health centers. The Senate companion bill, S. 3094, contains only the provisions relating to regional medical programs. H.R. 15759, *U.S. Compendium of Drugs,* calls for a drug compendium to be formulated by the Department of HEW and distributed to physicians, hospitals, and others who have use for such information. The Senate version of this bill is S. 2944 which was introduced previously by Sen. Nelson (D) Wisc. H.R. 15760 (S. 3096), the *Health Personnel Act of 1968,* authorizes a new federal health personnel system which would be known as the Health Service of the U.S., administered by the Secretary of HEW. Present commissioned officers of the U.S. Public Health Service would be given the option to transfer into this new health service. Not yet introduced are bills concerned with child health, reimbursement in-

centives in federally supported programs, and the establishment of a reasonable cost range for drugs in federally supported programs – *Legislative Roundup,* Mar. 8, 1968, Vol. IX, LR 7

Ground Floor

Institutions wishing to submit proposals for Medicare experimentation along the lines of President Johnson's health message may obtain guidelines to be followed by writing Thomas M. Tierney, Bureau of Health Insurance, Social Security Administration, Baltimore, Md. 21235. – *Washington Report on Medical Sciences,* Mar. 11, 1968

CHPS

Sen. Lister Hill has introduced a bill to extend the Vaccination Assistance Act (S. 3093). The Administration is not asking for renewal of the law, believing that vaccination programs can adequately be funded through the *Comprehensive Health Planning and Services Act.* – *Washington Report on Medical Sciences,* Mar. 11, 1968

Radiation Standards

Under a bill approved by the House Commerce Committee last week, HEW could set performance standards for medical x-ray devices, color television sets and other devices which emit radiation. The Radiation Safety Act (H.R. 10790), sponsored by Rep. Paul Rogers (D-Fla.), now goes to the House with a favorable chance of passage. – *Washington Report on Medical Sciences,* Mar. 11, 1968.

Health Resources Advisory Committee

New members of the President's Health Resources Advisory Committee are Dr. Louis M. Rousselot, Deputy Assistant Secretary of Defense (Health and Medicine); Dr. Lloyd C. Elam, President-Elect of Meharry Medical College, Nashville, Tenn., and Dr. James C. Cain of the Mayo Clinic. – *Washington Report on Medical Sciences,* Mar. 11, 1968

For and Against

Witnesses testifying before the Senate Government Research Subcommittee are split on the advisability of setting up a Federal Commission on *Health Science* and *Society,* proposed by Sen. Walter F. Mondale (D-Minn.). Dr. Adrian Kantrowitz of New York's Maimonides Hospital endorsed the commission, which he said should be composed mainly of physicians. Dr. Owen H. Wangensteen, professor emeritus of the University of Minnesota, opposes the idea of a Government-sponsored commission to review ethical questions such as human experimentation. – *Washington Report on Medical Sciences,* Mar. 11, 1968

Manpower Amendments May Help Cut Nursing School Attrition

Congressional approval of the new support formula contained in the Administration's Health Manpower Bill (S. 3095) would put strong pressure on nursing schools to cut their traditionally high dropout rate. The bill would give HEW power to change grant formulas in order to emphasize the number of graduates, instead of the number of students enrolled. This could mean a substantial financial loss to nursing schools since 25 to 40 percent of nursing students never graduate. The present grant formula is based on the number of students enrolled.

Putting emphasis on graduates will not necessarily lower the quality of education, HEW officials believe. Licensure examinations will be relied upon as sufficient incentive to maintain educational quality. Officials predict that the change in emphasis will encourage institutions to put more emphasis on student recruitment. Schools would be likely to think again before dropping a student who, with some special help, could make the grade.

Federal health manpower experts also are enthusiastic about the changes in construction program support proposed by the President. Through a single application, schools would be able to get funds to build a multi-purpose facility for teaching, research and library facilities, rather than having to apply through three separate agencies. – *Washington Report on the Medical Sciences,* Mar. 18, 1968

Rep. Mills Questions Proposals To Cut Medical And Drug Costs

It is no mere oversight that the Administration's key proposal to cut medical and drug costs has not yet been introduced in the House. Ways & Means Committee Chairman Wilbur Mills (D-Ark.) has serious doubts about several of the provisions and is in no hurry to see the measure introduced. There is a chance Mills will not even put in the bill himself. The President is asking Congress to give HEW blanket authority to implement new Medicare reimbursement methods and to set up "reasonable" price ranges for drugs. He also asks that the Maternal and Child Health program authorizations be increased by $100 million in fiscal 1970.

Mills is especially concerned about giving HEW carte blanche to put into practice new methods of reimbursing Medicare providers of care. In passing the 1965 Medicare law, Congress kept for itself the authority to change Medicare and Medicaid reimbursement methods. *Mills is understood to have some misgivings about relinquishing that power to HEW.*

Johnson's proposal to put restrictions on prices the Government will pay for drugs under Medicare and Medicaid also is giving the Ways & Means Committee pause. The question of therapeutic equivalency of different brands of the same drug is the problem. Committee staff members feel the language in this section of the Administration draft bill is ambiguous. The staffers want HEW to spell out whether it will be up to individual manufacturers to prove that their more expensive brands have therapeutic advantages over other brands, or whether it should be up to HEW to show that a lower-priced brand is as efficacious as its higher-priced counterpart. The draft bill appears to put onus on HEW. – *Washington Report on the Medical Sciences,* Mar. 18, 1968

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Quebec Beer-Drinkers' Cardiomyopathy

Quebec has acquired the distinction of having its name affixed to a disease entity . . . "Quebec Beer-Drinkers' Cardiomyopathy."

Almost simultaneously with Morin's report of the Quebec outbreak, McDermott . . . described an epidemic in Omaha; similar cases were reported from Minneapolis and Louvain, Belgium. . . . And it was also in Quebec that a most important clue to the etiology of the disease was eventually tracked down.

Nearly all the victims of these epidemics presented a similar, almost stereotyped, clinical-pathological picture. They were all heavy beer drinkers admitted to hospitals in congestive heart failure of recent onset. . . . No evidence of dietary deficiency or malnutrition was observed. The mortality was 40% to 50%. Significantly, no residual changes could be detected in the survivors several months after recovery, despite unchanged drinking habits.

So strikingly different was the . . . pattern of this disease from the classical alcoholic cardiomyopathy, it immediately became apparent that alcohol was not the sole culprit, and . . . the Quebec investigators soon produced sufficient circumstantial evidence to incriminate cobalt.

. . . The Quebec outbreak began after cobalt was added to the brewing process and ended when this additive had been removed.

Since cobalt can be taken with impunity by normal individuals in doses larger than those consumed by the affected beer drinkers, it would appear that alcohol may increase cardiac vulnerability to this metal.

. . . It can also be surmised that alcohol and cobalt are not the only factors involved, since many beer drinkers who consumed the same beer as those affected did not manifest the syndrome.

Submitted by Jacob B. Dana, M.D., Maine Heart Association.
Reference — Editorial, JAMA, Vol. 202, page 1145, 1967.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.
Brunswick, Maine

Role of the Thymus in Disease Control

NEW YORK — The thymus, a flat gland which lies behind the breastbone, may play an important role in the body's use of sodium and in the control or prevention of several diseases.

This was disclosed recently by the American Cancer Society in a report on Society-supported research by Dr. Constance R. Martin of Hunter College of the City University of New York.

Although scientists have been speculating on the function of the thymus gland for more than one hundred years, relatively little was known until recently. During the last ten years, researchers showed its role in the resistance to infection and the rejection of transplanted tissues. It has been implicated in a variety of diseases, including some forms of leukemia.

Dr. Martin reported several years ago that the thymus influences the growth of the prostate gland and seminal vesicles in male rats.

The prostate, which secretes an important part of the seminal fluid, lies close to the urinary bladder. It often enlarges distressingly, and is a frequent site of cancer in aging men. Although male sex hormones are known to promote growth of the prostate gland, enlargement usually occurs at a time in life when secretions of sex hormones are declining.

Dr. Martin and her associates, Dr. Betty Rosoff and Mrs. Lorraine K. Miller (a doctoral student) found that removal of the thymus in infant rats accelerated growth of the prostate during the puberty, while removal of the thymus at puberty led to enlargement of the prostate in middle and old age.

In other studies, Dr. Rosoff demonstrated that the thymus alters the response to gonadotrophins, pituitary hormones which control reproductive function.

Now Dr. Martin and a graduate student, Miss Siret D. Jaanus, have shown that the thymus enables the body to cope with excessive amounts of sodium.

Sodium and water retention are serious problems in a variety of disease conditions, including congestive heart failure and liver disorders. Too much retention leads to water-logging of the tissues (edema) and increases the work load of the heart.

The Hunter College investigators studied (1) rats in which the thymus was surgically removed, (2) sham-operated rats — controls used to rule out the effects of anesthesia and surgical stress and (3) unoperated rats.

With their drinking water replaced with a dilute solution of sodium bicarbonate, the rats were forced to ingest excessive quantities of sodium.

Rats with intact thymus glands (sham-operated or unoperated) were able to handle the excess sodium without difficulty. Their kidneys enlarged but were otherwise normal in appearance, and the excess sodium was excreted in the urine.

By contrast, rats deprived of thymus glands failed to show the kidney enlargement, and they retained excessive amounts of salt and water.

Because aldosterone, produced by the adrenal gland, is believed to be the most important hormone controlling sodium excretion, a second experiment was performed to determine whether the thymus exerts its effects on the adrenal gland.

Additional rats were (1) thymectomized and adrenalectomized, (2) sham-thymectomized and adrenalectomized, or (3) adrenalectomized only, but made to ingest excess sodium. Again it was found that animals deprived of their thymus glands were unable to cope with the excess sodium while the other groups (sham-thymectomized-adrenalectomized and merely adrenalectomized rats) excreted the extra sodium in the urine.

The findings were taken to indicate that the thymus produces something important to kidney function and to health.

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● Elemental Iron (as Ferrous Fumarate)	100 mg
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Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

*
anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. (Now isn't that a good idea in an iron-containing hematinic? We'll send you samples if you'll send a request on your Rx blank, addressed to Department 150.)

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County Society Notes

HANCOCK

A meeting of the Hancock County Medical Society was held on January 10, 1968 in Ellsworth, Maine with fifteen members and three guests present.

The speaker, Mason Trowbridge, Jr., M.D. of Bangor, was introduced by Philip L. Gray, M.D. Dr. Trowbridge spoke on his work in the laboratory diagnosis of pernicious and other anemias. He also introduced the recently arrived Director of Medical Education at the Eastern Maine General Hospital, Dr. Rolf Lium. Parenthetical remarks in following discussion were made regarding the climate of medicine in our region. Dr. Trowbridge felt that the atmosphere of special investigation in certain areas of medicine by his colleagues, as well as himself, would help make the practice of medicine more fun for us all. It would also create an atmosphere he felt that would make our area medically and scientifically attractive as it is in attracting professional people who wish to avoid the pressures of urban living.

BRADLEY E. BROWNLOW, M.D., *Secretary*

ANDROSCOGGIN

A meeting of the Androscoggin County Medical Association was held at the Central Maine General Hospital in Lewiston, Maine on January 19, 1968 with twenty-three members present. The meeting was called to order by the President, Joseph J. Rando, M.D.

John W. Carrier, M.D. introduced the speaker of the evening Mr. David R. Schropp, Account Executive, Merrill Lynch, Pierce, Fenner & Smith Inc. Mr. Schropp discussed different types of stocks and bonds, pointing out the advantages and disadvantages of each type, and stated that a portfolio of stocks should be tailored to individual needs. A question and answer period followed.

DONALD L. ANDERSON, M.D., *Secretary*

WASHINGTON

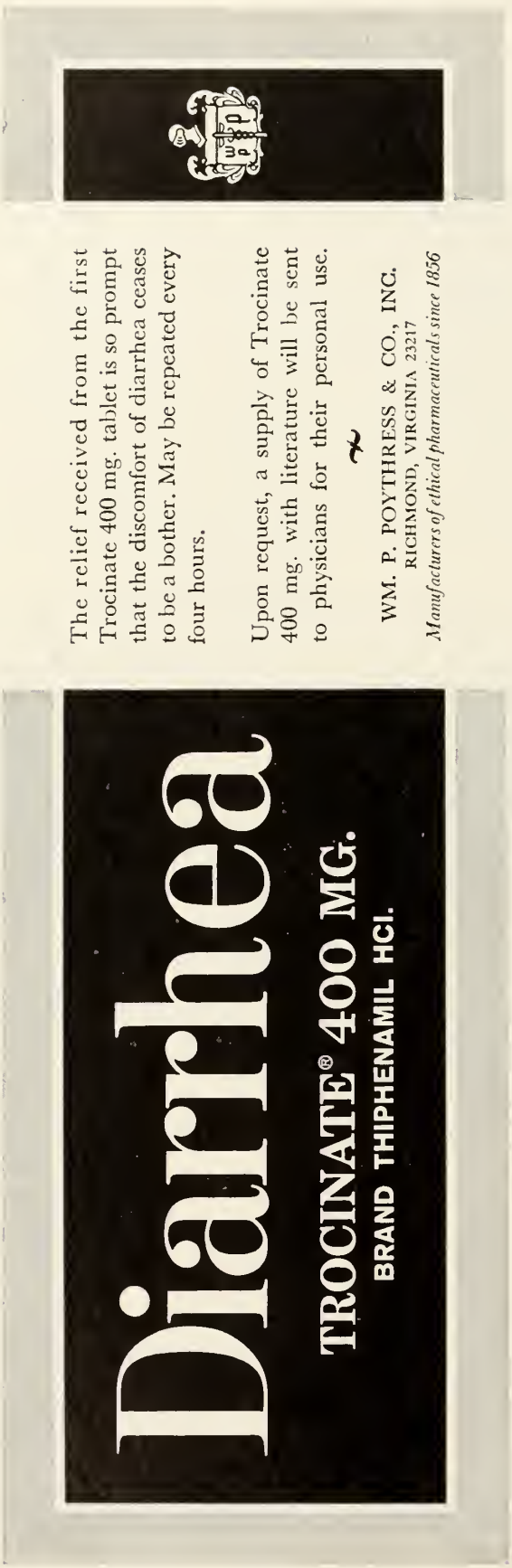
The Washington County Medical Society met at the Dennys River Inn in Dennysville, Maine on January 29, 1968.

Robert F. Russell, M.D., Councilor of the Fifth District of the M.M.A., spoke on the Maternal and Infant Care Program. He presented a plan that he hoped we would approve. It was a revision of the present Maternal and Infant Care Program. This new program was discussed by all members present. It was finally voted that we approve this new plan, presented by Dr. Russell, that he bring it up to the Hancock County Medical Society and that the two societies unite in presenting a single plan. It was also decided that the Public Health Physician for Hancock and Washington Counties, John Kazutow, M.D. of Columbia Falls, be the co-ordinator. Dr. Kazutow would be helped by a committee of three from each county.

Walter A. Mendyka, M.D., President of the Society, presented a letter stating that specialists from the Eastern Maine General Hospital in Bangor would be available for attendance at hospital staff meetings to review problems and also to discuss advances in various fields.

There was also a discussion about the present Medical Examiner system and also about the necessity for securing a pathologist for the county. It was felt that a pathologist could act as County Medical Examiner and also be pathologist for the three existing hospitals in Washington County. It was voted to send a letter to the Attorney General of the State of Maine favoring this plan.

KARL V. LARSON, M.D., *Secretary*



News and Notes

Central Maine General Hospital 1968 Postgraduate Refresher Course on Medical Aspects of Industrial Medicine

Hiebert Hall 3:00-5:30 P.M. Fee: $30.00*

April 3 – *Medical Criteria for the Capacity to Work*
George F. Wilkins, M.D., Medical Director, New England Tel. & Tel. Co., Boston, Massachusetts

April 10 – *Medical Problems Imposed by Industrial Environment*
Robert C. Thompson, M.D., Manager of Health and Hygiene, General Electric Co., West Lynn, Massachusetts

April 17 – *Relationship Between Plant and Community Physician*
Karl T. Benedict, M.D., Medical Director, Norton Company, Worcester, Massachusetts

April 24 – *A Report by the Industrial Accident Commission on Medical Problems in the Central Maine Area*
John V. Keaney, Chairman, Industrial Accident Commission, Augusta, Maine

*No charge to Interns, Residents and Physicians in the Armed Forces.

Application has been made to the American Academy of General Practice for approval for 10 hours of postgraduate credit.

Workshop on Hypnosis

A Workshop on Hypnosis for physicians, dentists and psychologists sponsored by the New England Society of Clinical Hypnosis and Oral Surgery, Department of Boston City Hospital, will be held at the Mallory Amphitheater at the Boston City Hospital on May 9-12, 1968.

The staff includes: Herbert Spiegel, M.D., Columbia University; Calvert Stein, M.D. and Leo Alexander, M.D., Psychiatrists; Donald Coulton, M.D., Obstetrics and Gynecology; Andrew St. Armand, M.D., Anesthesiologist; Harold Golan, D.M.D.; and Israel Kamens, M.D., General Practitioner.

For further information contact Dr. Lawrence M. Staples, Workshop Director, 311 Commonwealth Avenue, Boston, Massachusetts 02115.

Dr. Dillihunt Makes Automotive Safety Committee Again

Richard C. Dillihunt, M.D., Portland, Maine, has been reappointed a member of the Committee on Medical Aspects of Automotive Safety of the American Medical Association.

Dr. Dillihunt's reappointment was announced by Wesley W. Hall, M.D., chairman of the AMA's Board of Trustees.

The AMA Committee on Medical Aspects of Automotive Safety develops medical information for the practicing physician, enabling him to advise and inform his patients concerning hazards which may result when the driver has abnormal physical conditions, certain diseases or emotional disturbances, or when he uses drugs and alcohol. The Committee passes on to the driving public information about those medical conditions which may adversely affect driving proficiency, and encourages automotive designers and engineers to study and improve safety features in vehicle design.

Book Reviews

Congestive Heart Failure by Ralph M. Myerson, B.S., M.D., F.A.C.P. and Bernard H. Pastor (deceased), A.B., M.D., F.A.C.P. 174 pages. Published by The C. V. Mosby Co., St. Louis, Mo. 1967. $12.85. First Edition.

This 174-page monograph is divided into six chapters: The Normal Cardiovascular system; The Etiology and Pathogenesis of Congestive Heart Failure; The Diagnosis of Congestive Heart Failure; The Treatment of Congestive Heart Failure; Refractory Cardiac Failure; Acute Pulmonary Edema. The first two chapters which are of greatest importance for the comprehension of the pathological physiology of congestive heart failure are quite brief, but very elegantly written. The authors manage to describe the anatomy and physiology of the myofibril in two and a half pages, electrophysiology in three pages, etiology of congestive heart failure in less than one-half page. In the entire book are three references totalling one and one-half pages to myocarditis and primary myocardial disease. The authors do not venture into scholarly discussion but remain spartan, concise and precise.

The authors go into considerable detail about the symptoms and signs, radiological and EKG findings and therapeutic modalities in the subsequent chapters on diagnosis and therapy of congestive failure. The use of ethacrynic acid and furosemide are discussed. There is a valuable chapter on the diagnosis and therapy of refractory cardiac failure and a separate chapter on the etiology and therapy of pulmonary edema. These discussions are up to date and well written.

The authors have added a carefully chosen list of references to each chapter. The X-ray reproductions are of sufficient quality so that a Kerley B line could easily be seen. In their preface the authors state that their aim was to correlate the fundamental disturbances present in congestive heart failure with the clinical picture and therapy. The authors have been successful in their endeavors at the level of the busy physician in practice. There is a great deal of useful, easy to comprehend information available in this compact book.

PETER F. LANSING, M.D.
Augusta, Maine 04330

Gynecologic Pathology by Frederick T. Kraus, M.D., Associate Pathologist, St. Luke's Hospital; Instructor in Pathology, Washington University School of Medicine, St. Louis, Missouri. 504 pages plus FM I-IX, 7″ x 10″, 488 illustrations. Price $18.50. Published by C. V. Mosby Company, St. Louis, Mo.; 1967.

This is a new book in the uncrowded field of gynecologic pathology. Doctor Kraus is a pathologist and has written his book as though a well-informed clinician were looking over his shoulder. He has, I think, accomplished quite well his attempt to present an uncluttered view of the pathologic changes of the female genital organs and the placenta which are of clinical importance. Emphasis is on the more common entities. His discussions are concise, meaty and include a reasonably unbiased clinical pathologic correlation for each entity. There are review sections on embryology, cytogenetics and vaginal cytology which are up to date. It was not the author's intent to produce a definitive text. For detailed current references the end of each chapter has an excellent extensive bibliographic section which is well organized and, unlike some, lends itself to easy use. The book is profusely illustrated with reproductions of good quality. If one's field of interest includes gynecology, whether clinician or pathologist, and he does not have a recent text for his library, then this book deserves careful consideration.

NELSON P. BLACKBURN, M.D.
Brunswick, Maine 04011

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The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

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Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

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One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

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Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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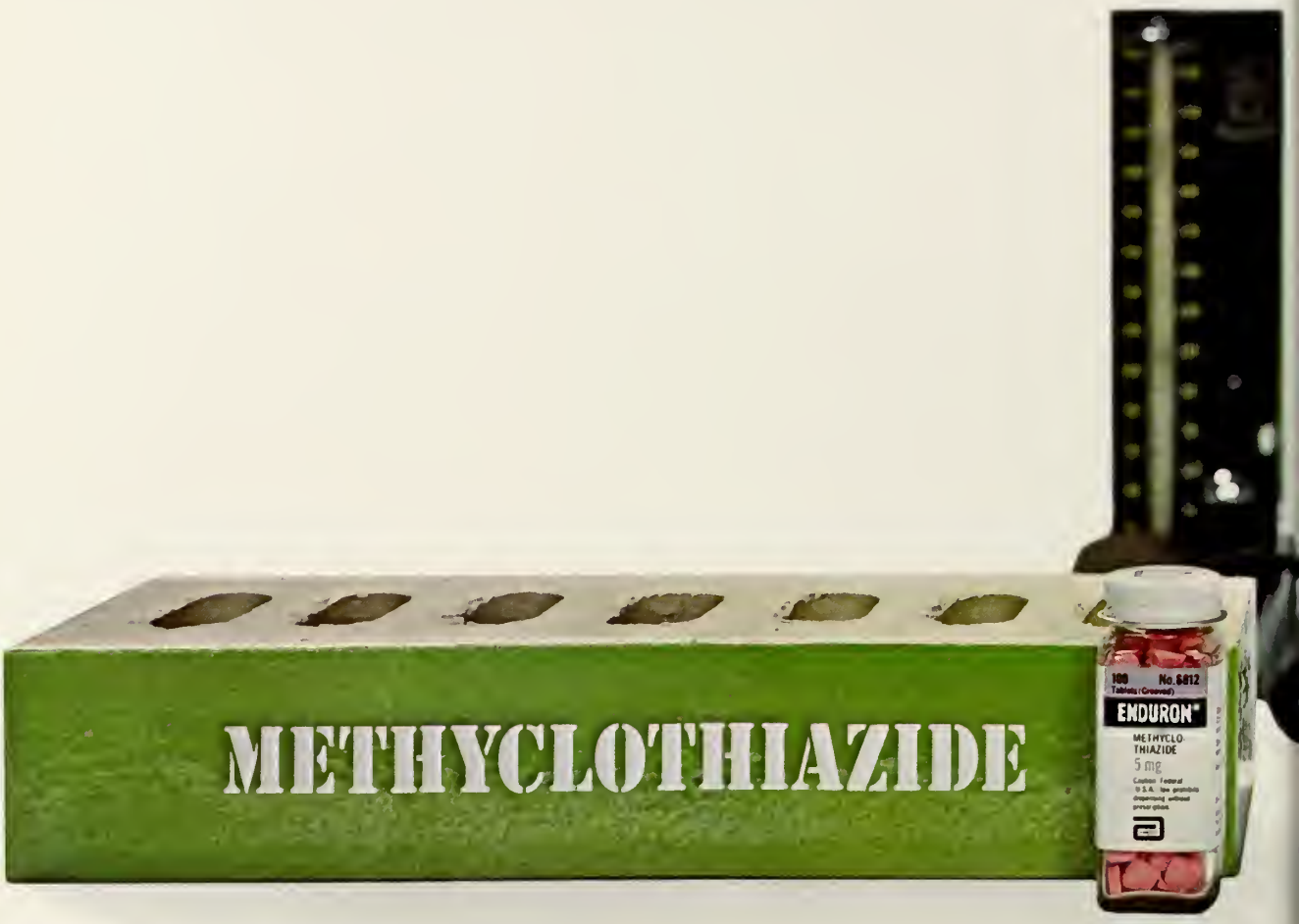
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Abbott Antihypertensive Building Blocks

A simplified approach to the practical management of hypertension



Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persits for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON

METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

When you wish to build further response, consider shifting to Enduronyl.

Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

Once a day, every day

ENDURONYL

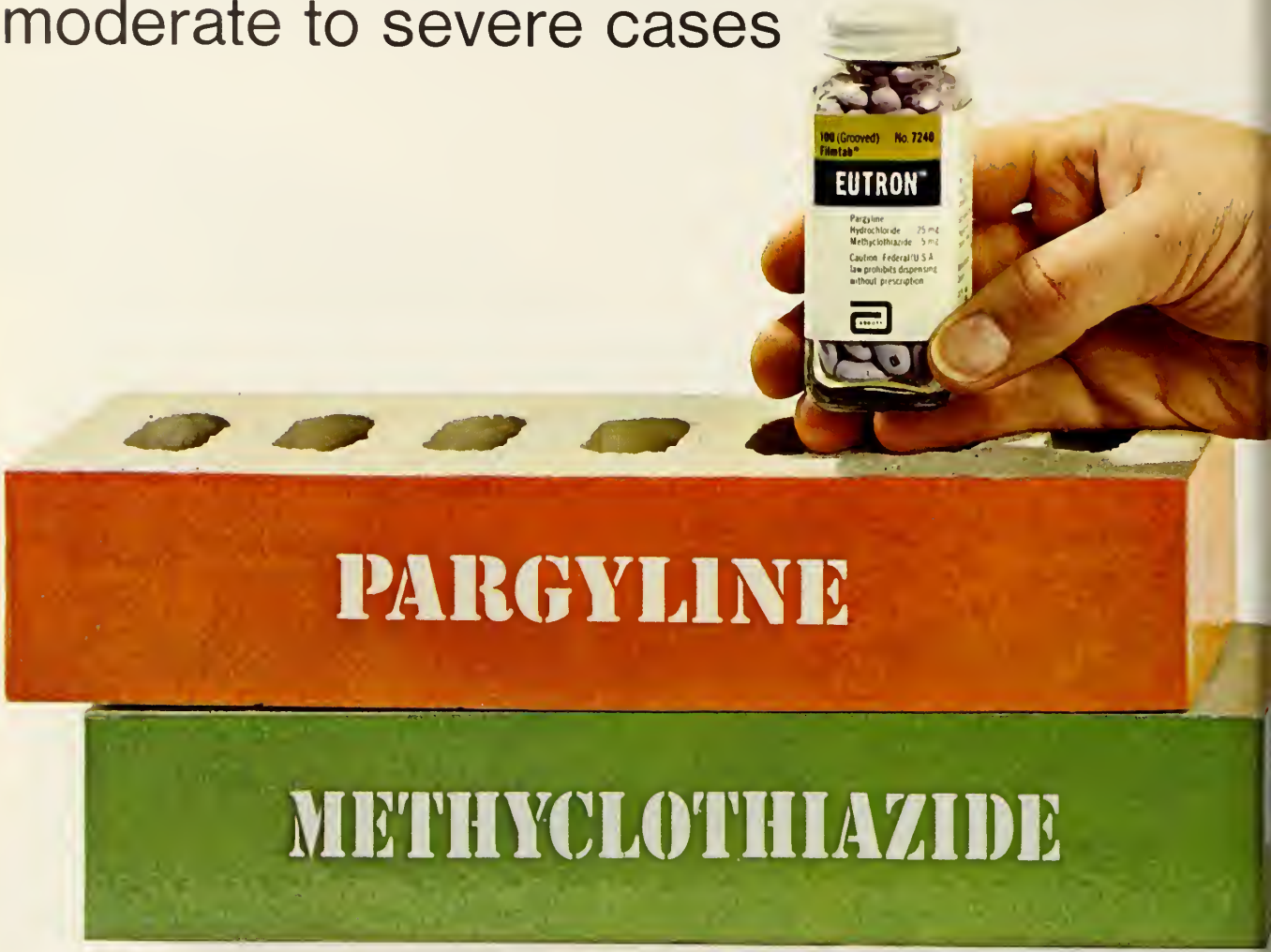
METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amendable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

TM-TRADEMARK

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅓ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination.

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ABBOTT



One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.
Usual Children's Dose: One or two teaspoonfuls three times daily.

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Each Cough Calmer™ contains the same active ingredients as a half-teaspoonful of Robitussin-DM® Glyceryl guaiacolate, 50 mg., Dextromethorphan hydrobromide, 7.5 mg. A. H. Robins Company, Richmond, Virginia 23220

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Make tuberculin testing routine with every physical examination.



TUBERCULIN TINE TEST (Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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'EMPIRIN'® COMPOUND with CODEINE PHOSPHATE gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

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An uncommon steroid for common inflammatory dermatoses

In everyday topical steroid therapy, Synalar produces rapid resolution of inflammation and itching in steroid-responsive dermatoses—and at relatively low cost to the patient.

Advanced molecular design enhances potency

Synalar combines the advantage of earlier corticosteroid compounds with unique structural innovations. As a result, preparations of Synalar 0.01% and Synalar 0.025% have been reported to be more potent topically and significantly more effective than hydrocortisone 1.0%. The unique fluocinolone acetonide molecule provides one of the most useful topical corticosteroids for everyday practice.

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The clinical efficacy of Synalar has been extensively documented in the world literature. Commonly encountered diseases such as allergic and contact dermatitis, eczematous and seborrheic dermatitis, and neurodermatitis respond rapidly to Synalar, often where previous therapy with other topical corticosteroids has failed.

Low patient cost for wider usefulness

With Synalar, a high degree of efficacy does not mean high price. And—a small quantity goes a long way. Thus, your patients can often obtain the "economy" of a hydrocortisone preparation with the proved efficacy of a potent, truly advanced steroid.

Synalar®
fluocinolone acetonide





For everyday topical steroid therapy

Synalar® 0.01%

fluocinolone acetonide provides economy in two practical dosage forms

For general use, the most economical and widely applicable concentration of Synalar is 0.01% Cream in a water-washable, vanishing cream base. Synalar Solution 0.01% is especially valuable in dermatoses involving moist, intertriginous areas or hairy sites where creams and ointments do not spread or penetrate readily. Synalar Solution is a unique dosage form—clear, nongreasy, cosmetically elegant.

Product Information

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. *Precautions:* Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. *Side Effects:* Side effects are uncommon with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. In such cases the agent should be discontinued and appropriate measures taken. *Availability:* Synalar (fluocinolone acetonide) Cream 0.025%—5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01%—15, 45 and 60 Gm. tubes and 120 Gm. jars. Solution 0.01%—20 and 60 cc. plastic squeeze bottles. Ointment 0.025%—15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream—5, 15 and 60 Gm. tubes.

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Butisol SODIUM®

(SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated.

BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety, and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

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For a cold, NTz® Nasal Spray provides rapid relief of nasal symptoms. Relief starts with the first spray which opens the inferior part of the common meatus. A second spray, a few minutes later, will shrink the turbinates to help provide sinus drainage and ventilation. Dosage may be repeated every three or four hours as needed, for temporary relief of symptoms. NTz is well tolerated but overdosage should be avoided.

As a sinusitis deterrent, NTz Nasal Spray can be used to keep the nasal passages open during a cold to help prevent development of acute sinusitis—or to help prevent the acute condition from becoming chronic.

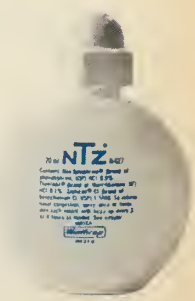
Supplied: NTz Nasal Spray, plastic squeeze bottles of 20 ml.; NTz Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

NTz is more than a simple vasoconstrictor. It contains

Neo-Synephrine® (brand of phenylephrine) HCl 0.5 per cent, the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction.

Thenfadil® (brand of thenyldiamine) HCl 0.1 per cent, topical antihistamine for reduction of rhinorrhea, sneezing or itching. It combats the allergic reactions that may occur in colds or sinusitis.

Zephiran® (brand of benzalkonium, as chloride, refined) 1:5000, antiseptic preservative and wetting agent to promote penetration and spread of the formula.



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Valium® (diazepam)

useful adjunct for the coronary patient...

When oppressive feelings and psychic tensions are severe and cooperation with the physician poor, it may be helpful to add adjunctive Valium (diazepam), 10 mg or 5 mg t.i.d., to the coronary patient's regimen. Valium (diazepam) helps to promote the needed relaxation that the patient requires to make him less preoccupied with his condition and more inclined to cooperate in, and benefit from, the total therapeutic program. Valium (diazepam) may be administered in the presence of secondary depressive symptoms.

in the hospital...

(5 mg. or 10 mg t.i.d.)



convalescing...
(2 mg or 5 mg t.i.d.)

The heart patient who leaves the hospital to enter a period of slow restorative treatment is often forced to make emotionally difficult adjustments. The resulting stress of this period may again cause psychic tension to mount to potentially harmful levels. To augment your reassurance and the emotional support of his family, a 2 mg or 5 mg t.i.d. regimen of Valium (diazepam) can reduce psychic tension and thereby help the patient to accept necessary restrictions more calmly, and to adjust to his illness more realistically.

Getting back to work presents additional stresses for the cardiac patient. There are often anxiety-producing features in the job which can be more significant than the physical or intellectual demands of the work. Valium (diazepam), 2 mg or 5 mg t.i.d., may be a useful adjunct to reduce overreaction to these stresses and thus help the patient to face job situations more calmly and rationally.

back at work...
(2 mg or 5 mg t.i.d.)



Valium® (diazepam)
to help relieve psychic tension

and for the patient with tension-induced sleeplessness, remember the value of an extra tablet at bedtime

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states, moderate to severe psychoneurotic states with anxiety, apprehension or agitation alone or with depressive symptoms; somatic complaints which are concomitants of emotional factors; acute agitation due to alcohol withdrawal; muscle spasm associated with cerebral palsy and athetosis.

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d.

Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions.)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

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a solution to peptic ulcer distress

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with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

Concomitant relief of G.I. gas distress—
with the proven[1] defoaming action of simethicone.

Prolonged acceptance confirmed—
in 87.5% of 104 patients after a total of 20,459 documented days of therapy.[2]

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References: 1. Hoon, J.R.: Arch. Surg. *93*:467 (Sept.) 1966.
2. Danhof, I.E., Personal communication.

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in moderate hypertension and
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When your patients expect a lot...

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Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Regroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-B
For details, see complete Prescribing Information.

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Geigy



"Upper respiratory infection! I thought everything was a 'virus' these days?"

Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

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Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever.

Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.

Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; and acetaminophen, 500 mg.



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supplied in ¾, 1½, and 3-grain Pulvules®



Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.



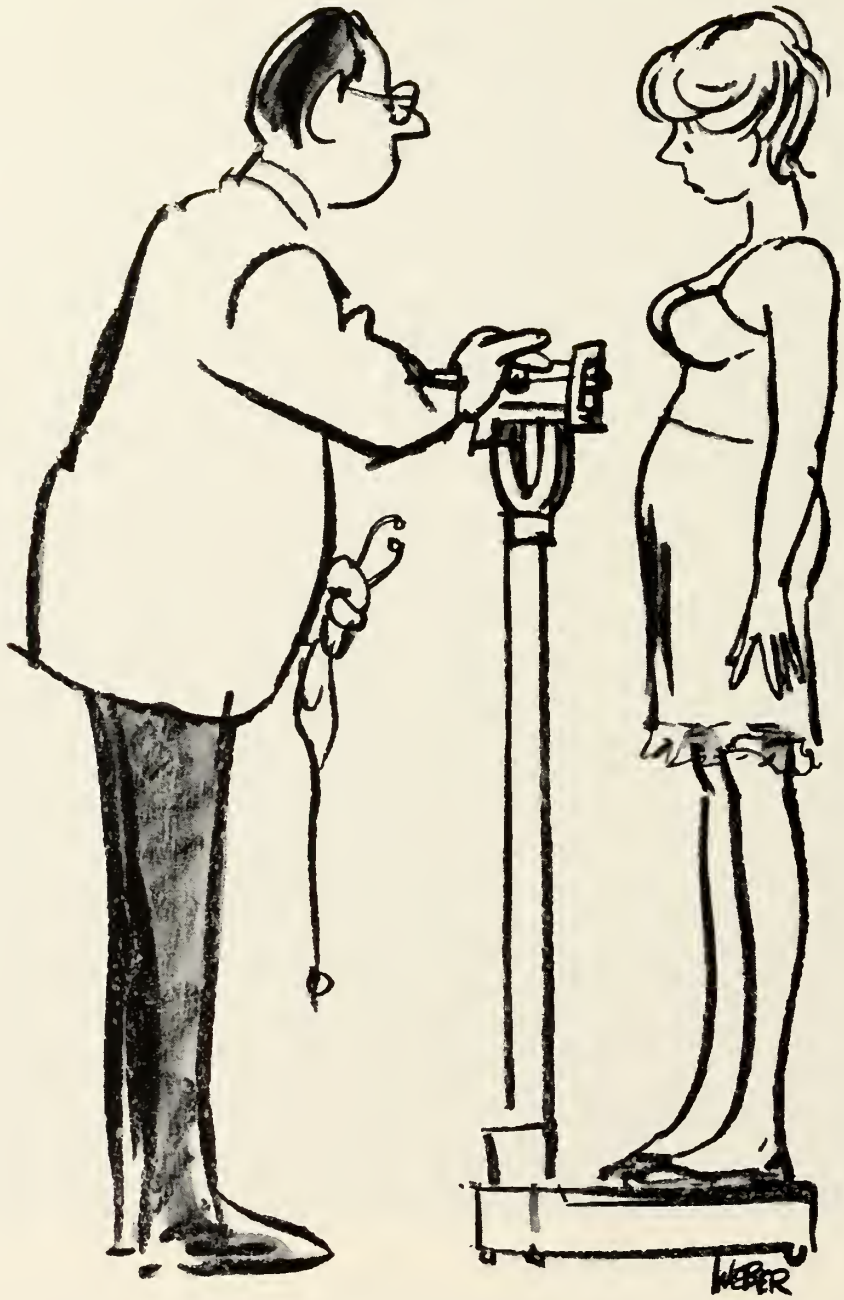
Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

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Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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(chlordiazepoxide)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 50. Libritabs™ (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100. With respect to clinical activity, capsules and tablets are indistinguishable.

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1968 Annual Session
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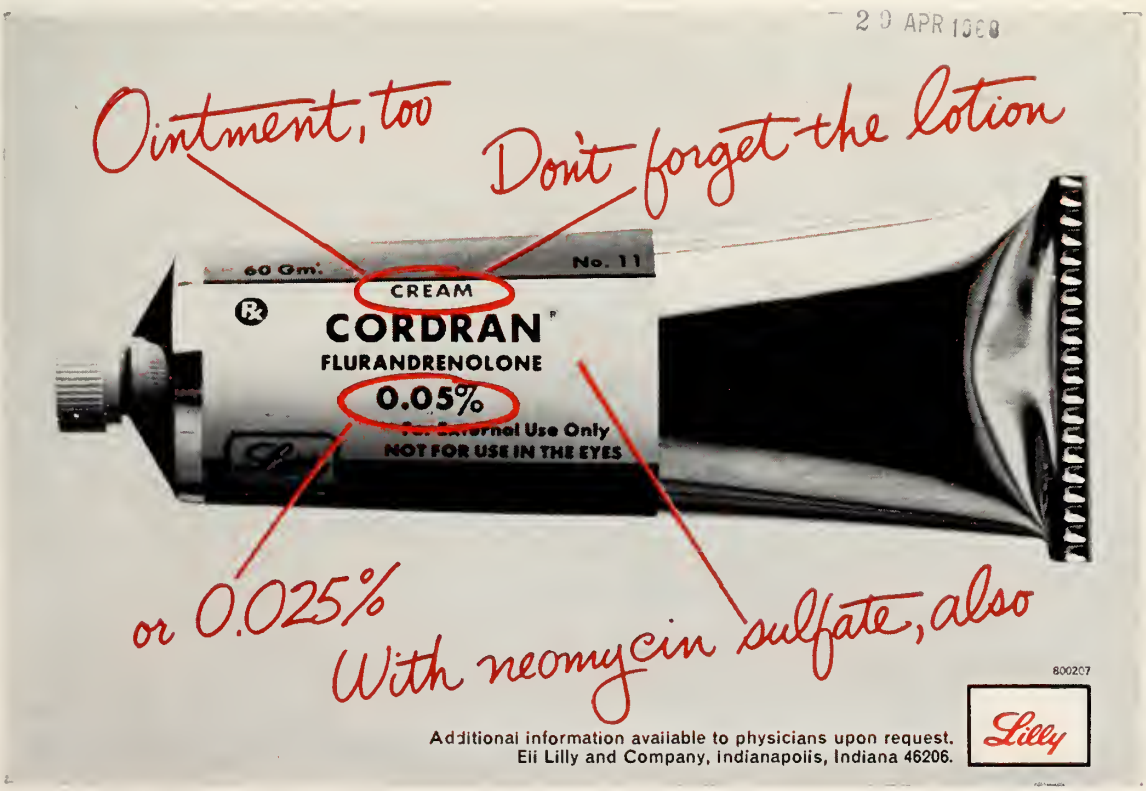
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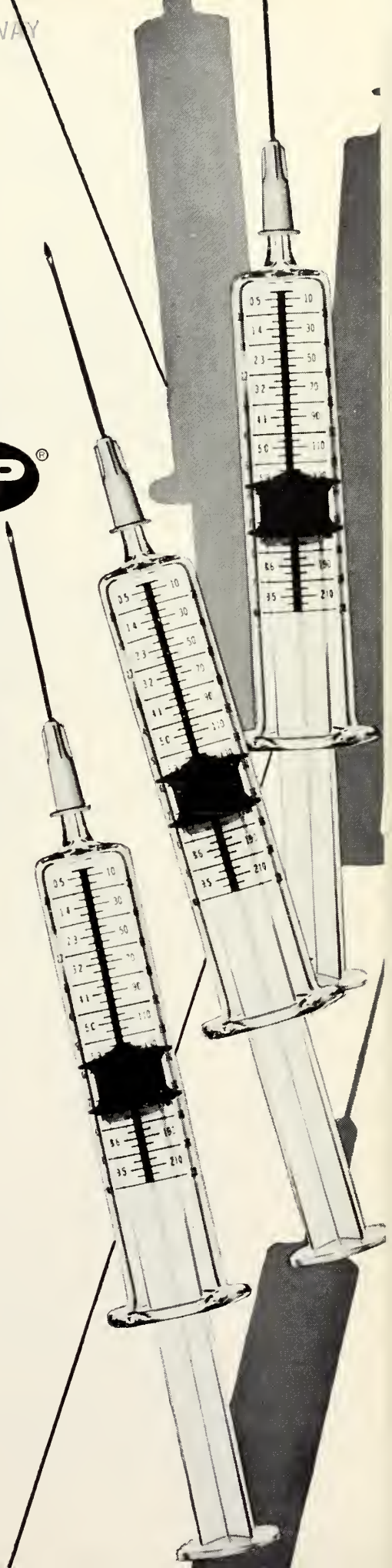
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BSP®



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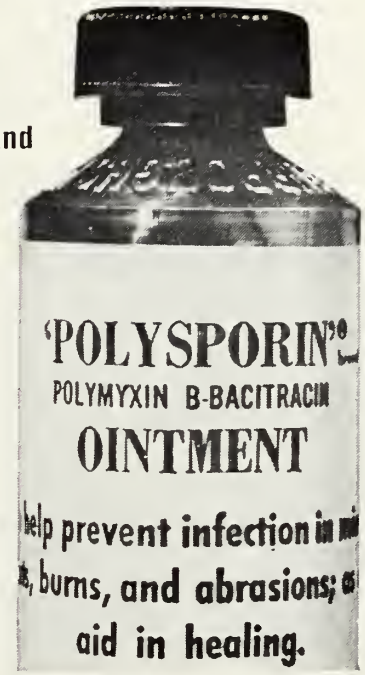
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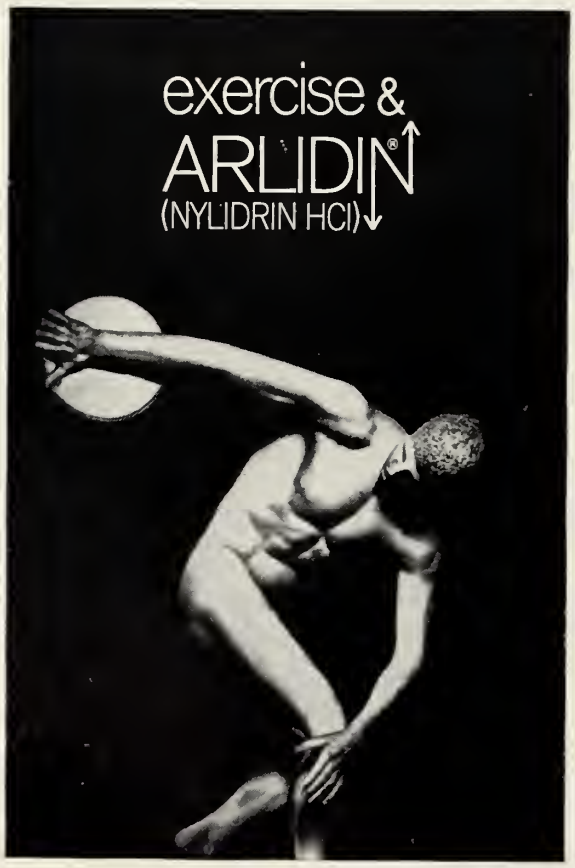


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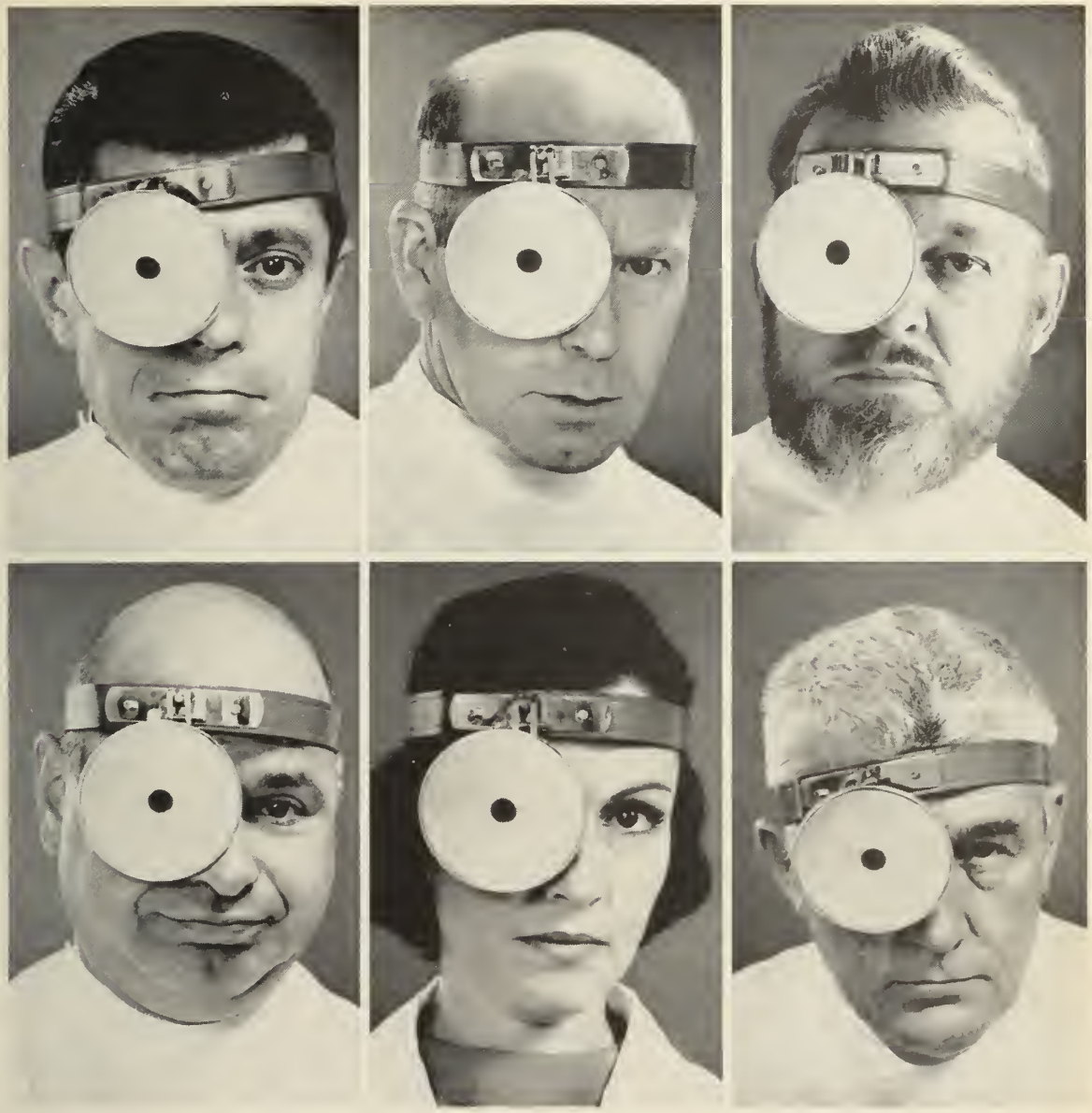
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Stroboscopic Cardioscan*

Niles L. Perkins, M.D.,** Clifford V. Nelson, Ph.D.,***
Arthur F. Wilkinson† and Howard T. MacFarland, M.S.††

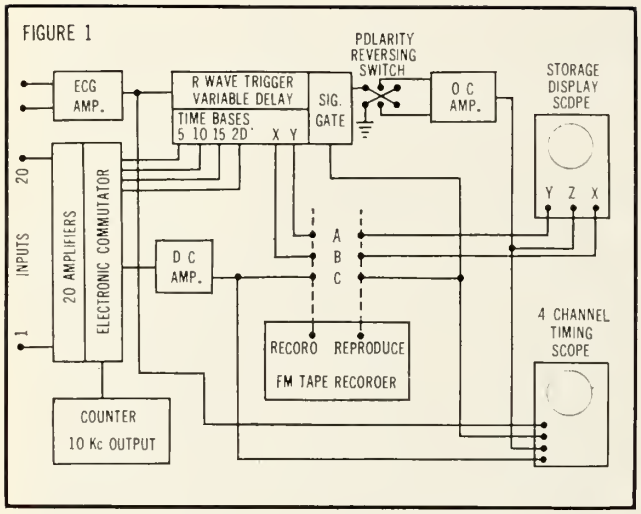
Since the time of Einthoven, researchers have devised many methods to display electrical potentials over the precordium associated with cardiac contraction in an attempt to diagnose heart disease. The electrocardiogram and various systems of vectorcardiograms are best known and most widely used. In 1948, Goldman et al[1] and Lilly[2] in 1949, published descriptions of techniques to display visually potentials over the precordium. Goldman used a specially constructed tube containing 16 grids, each connected to a pick up electrode. An electron beam scanned the grids in succession and dark and light areas appeared on the cathode ray tube corresponding to the electrode locations. Motion pictures were taken to record the changing patterns that occurred during cardiac systole. Lilly set up an array of electrodes over the chest and each electrode was connected through an amplifier to a glow tube. Light intensity was proportional to potential, so that one could observe the variations either visually or by photographs.

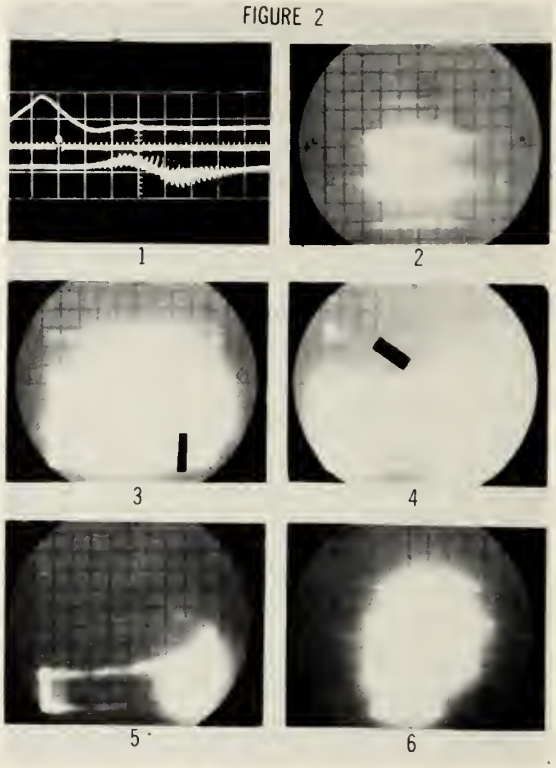
None of the visual methods of display of chest potentials was found adequate for clinical diagnosis, so investigations in this area during the past few years have been meager. The work of many investigators such as Katz,[3] Taccardi,[4] Horan,[5,6,7] Scher,[8] Nelson[9,10,11,12] and others on instantaneous chest potentials throughout the cardiac cycle continued however, and considerable information is now available.

In our laboratory Nelson et al constructed an analyzer to obtain instantaneous scans of potentials of up to 20 electrodes on the thorax.[10] In this system, electrodes are placed around the chest in a horizontal row. The electrode potentials are applied through 20 preamplifiers to an electronic commutator, which samples each electrode sequentially. Since the sampling time is 50 μ sec. complete circumferential potential distributions are obtained every millisecond during the cardiac cycle. The commutator output voltages are further amplified and applied to a magnetic tape recorder. By re-recording the data, time expansion of 512 to 1 is obtained. The final records are applied to a hot-stylus direct-writer which is run at a paper speed of 100 mm/sec., each one msec record occupying about 5 cm on the direct-writer. This system has been used diagnostically and to obtain information about the dipolarity of the heart.[12]

As a supplement to this type of information, we have been intrigued with the concept of a visual display of potentials and therefore have developed an electronic unit called a stroboscopic cardioscan. This unit allows us to visualize on a storage oscilloscope the instantaneous potentials over the chest at any 2 millisecond period of cardiac systole that we wish to study. A block diagram of the electronic units required to present the displays is shown in Fig. 1. The scanning unit was that developed by Nelson et al. The trigger circuits with variable delay, staircase generator and blanking circuits were developed in cooperation with Professor Howard MacFarland of the Electrical Engineering Department of the University of Maine. A Hughes Aircraft Corp. storage oscilloscope Model #203 was used as the display unit.

*This project supported by Public Health Service Research Grants HE-07470, HE-09062 from the National Heart Institute and by a grant from the Maine Heart Association.
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†Research Assistant, Maine Medical Center, Portland, Maine 04102.
††Professor, Electrical Engineering Department, University of Maine, Orono, Maine 04473.
This investigation was supported in part by a Public Health Service Research Career Program Award K6-HE-1932 from the National Heart Institute.





The signals from twenty leads are fed through preamplifiers to the commutator where they are sequentially sampled and the resultant output amplified to the level needed to operate the display scope. Simultaneously, output pulses corresponding to every fifth segment of the commutator are used to trigger a linear horizontal sweep voltage and a vertical staircase voltage to provide a raster of four lines on the display, synchronized with the output from the commutator. In order to fill in the field, a 40Kc sine wave is superimposed on the vertical staircase.

In order to display only 2 milliseconds of the commutator output, it is necessary to derive a gate which is stably synchronized to the EKG. An output from an EKG amplifier is clipped, and differentiated to derive a trigger pulse that occurs on the leading edge of the R-wave. The trigger pulse operates a variable delay network to obtain from 1 to 290 milliseconds of delay before the generation of a two millisecond gating pulse.

Since the gate trigger is derived from the leading edge of the R-wave, and since it is desirable to be able to observe that portion of the cardiac cycle preceding the R-wave, it is necessary to delay both commutator output and sweep voltages so that the beginning of the QRS complex in the signal channel occurs after the trigger. The delay between record and replay heads of a multichannel tape recorder is used to provide a 50 millisecond delay of signal and sweep voltages. The signal output from the tape recorder is then fed through the signal gate to the display scope.

An auxiliary four-channel timing oscilloscope is used to monitor the circuitry to set the delay network to the desired point on the EKG. The four channels monitor the output of the EKG amplifier from which the trigger is derived, the gated output to the display scope, and the composite output from the commutator both before and after delay.

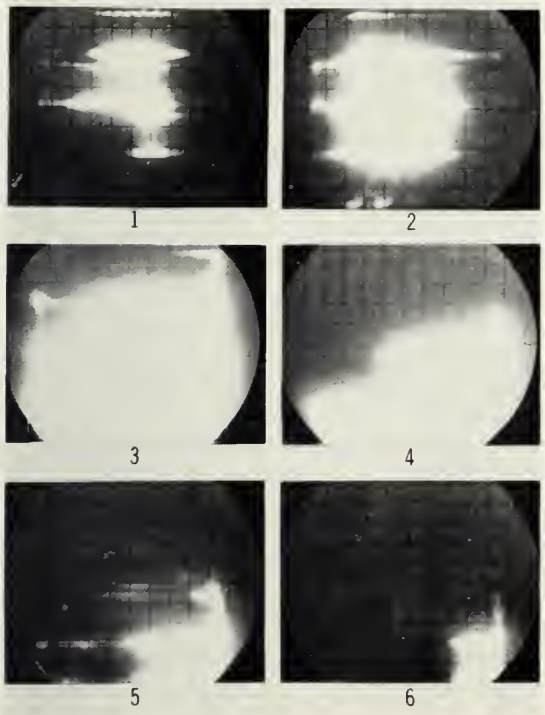
The Hughes storage oscilloscope used as the display scope has one major drawback in that only positive or negative potentials can be visualized at one time. This means that a picture has to be taken of the positive voltages, the input leads reversed, and then a picture taken of the negative potentials. We have considered using a color television picture tube with one color positive and another color negative, but believe we would have inadequate light to photograph.

In order to pick up and display the potentials over the precordium in a manner which would be most useful clinically, our studies have been done with the electrodes placed in 4 rows of 5 electrodes each. Electrodes #1, 6, 11 and 16 start each row. Number 1 is in the second intercostal space just to the right of the sternum or what we would call a $2V_1$ position. Number 2 is in the second intercostal space just to the left of the sternum $2V_2$ position, #6 in third interspace just below $2V_1$ etc. The potentials from these electrodes are then displayed in exactly the same position on the face of the oscilloscope tube.

Fig. 2, photo #1 shows the trace on the timing scope with the composite output delayed. The top trace is the R-wave from which the trigger is derived. The middle trace shows the output from the signal gate, and the bottom trace the delayed composite waveform. The portion of the waveform being sampled is that portion directly beneath the gate observed on the middle trace. Varying the delay moves the gate making possible the continuous monitoring of that portion of the cardiac systole being displayed. The vertical lines on this photo are 10 milliseconds apart.

Photo #2 shows the display on the face of the storage tube 7.5 msec after the position of the blip noted in photo #1. It will be noted in this picture that during

FIGURE 3



the first phase of cardiac systole the voltage over the precordium is quite localized. In Photo #3 we see the spread of activation further over the precordium and down toward the apex. Photo #4, which is 40 msec after the blip shows the progress of activation to the apex; however, blank areas shown in our pattern at electrode positions #12, 13, 17, and 18 are not artifacts but may indicate a double dipole or local effect. We have not yet definitely identified the etiology of this area, as proof will require instantaneous scans completely around the chest at this same instant of time in the cardiac cycle.[12] We are in the process of doing this on both normals and patients with heart disease.

Photo #6 shows a picture of this same time interval of cardiac systole with reverse polarity and thus negative potentials only indicated in white. It will be noted that this picture of negative potentials fits perfectly into the blank spaces shown in Photo #4. Photo #5 shows the decline of positive potentials over the precordium. It will be noted however by examining the envelope of the signal in Photo #1 that considerable negative potential is still present during the remainder of systole. We are now studying this with our reverse polarity system. Figure 3 shows patterns from another person at 0, 10, 30, 50, 60 and 70 msec.

Displays over the chest during atrial contraction or during repolarization have not yet been studied. We hope to investigate these areas in the future but feel that most diagnostic potential will be during ventricular systole. We wish to emphasize the point that we can study the same instant of the cardiac cycle on the same individual in repeated experiments. This allows us to follow any change in cardiac activation as it is presented on the chest wall and therefore should be an important factor in using this display concept in clinical diagnosis.

The concept of displaying chest potentials in this manner was first conceived by one of us (N.L.P.) 17 years ago. At that time the scanning unit was to be a television iconoscope-like tube with the light sensitive grid replaced by a grid with multiple external connections which could then be scanned in sequence by an electron beam. This concept never reached development and only after construction of Dr. Nelson's 20 channel analyzer was work continued. Use of a 100 channel multiplexer would allow much better definition of instantaneous chest potentials and we hope to carry out work with one of these units in the future. An ideal form of display, if feasible, would be a color television tube with positive and negative potentials represented by two different colors.

We feel that the future of this technique in clinical medicine may be extremely important. One should be able to visualize myocardial infarctions directly and even estimate their size. By putting electrodes at different locations the lateral or posterior areas of the chest can be visualized. Bundle branch blocks and differentiation of bundle branch blocks and hypertrophy should be easily done. With the present system cardiac arrhythmias should not interfere with the results, as the stroboscopic effect of trigger and delay circuits plus the summation effect of the storage scope should give adequate displays.

At the present time we have done 11 experiments on basically normal humans using various electrode positions. We have done one individual with an inferior myocardial infarction and another with an incomplete right bundle branch block both of whom have shown abnormal and interesting displays. Further information on both normal and abnormal patients will be reported in the future.

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Care of the Patient With Renal Disease*

Donald F. Marshall, M.D., William H. Austin, M.D. and Stanley G. Dienst, M.D.

This is a study of fifty-one cases of primary renal insufficiency. It represents the experience of one hospital for a year. The patients were admitted to the care of several different attending physicians. In most cases the patient and the various facets of his management were known to the authors during the hospital admission. For purposes of description, the cases are classified as follows: Acute glomerulonephritis (8), chronic glomerulonephritis (13), nephrotic syndrome (8), polycystic disease (4), pyelonephritis and infectious disease (6), systemic diseases (7), and others (5).

Acute Glomerulonephritis – There were eight patients in this group. Three were ten years of age or less, three teenagers, and two over twenty (36 and 60 years). BUN's were all less than 70 mg %. Gross hematuria was a definite presenting symptom in only three cases, though microscopic hematuria and granular casts were present in most patients. Albuminuria ranged from a trace to 800 mg % and was reportedly absent in the urine of one patient. The ASO titer was positive in the four cases in which it was measured – ranging from 250 to 833 units. In-patient throat cultures, however, were unproductive usually showing an alpha streptococcus. In contrast to chronic cases, there was no consistent anemia in this group, the lowest hemoglobin being 9.5 grams %. The prognosis was considered good in four patients, fair in three, and poor in one. There were no deaths in this group.

Chronic Glomerulonephritis – There were thirteen patients in this group. The average age of these patients was 31 years, one being 57 and the remainder under 44 years. Two patients under twenty had entered the chronic stage and one of these died. In the whole group, the BUN concentration was: less than 20 mg % in two, between 20 and 100 mg % in six, and over 100 mg % in five. Single serum creatinine determinations were of no help in evaluating the renal function when the BUN was low. Casts were reported in the urinary sediment in only five cases. Red and white cell casts were reported as frequently as hyaline casts. Albuminuria was recorded in nine. In eleven of the thirteen, the hemoglobin was between 6.8 and 8.4 grams %. There were three fatalities. In eight of the ten remaining cases, the patients were free of serious hypertension or systemic disease.

Nephrotic Syndrome – Eight patients were classified as having the nephrotic syndrome. There were two adults, one 58-year-old with "idiopathic adult nephrosis," and the other, a 73-year-old physician, with Waldenstrom's Macroglobulinemia. This patient has gained a remission with the use of Alkaran and steroids. One infant of three weeks had a total protein of 2.25 grams %, 1000 mg % albumin in the urine, and cholesterol of 230 mg % and was classified as congenital nephrosis. There were three children seven to nine years old. All of these had, or were known to have had, remission with steroids. One of these was explored and found to have primary pneumococcal peritonitis. The one fatality in the nephrotic group was an eighteen year old boy in the latent phase of glomerulonephritis who developed pneumonia and died of sepsis.

Table 1

Miscellaneous Causes of Renal Insufficiency

Infectious		*Congenital*	
Pyelonephritis	3	Infant with Flank masses and elevated BUN resolving spontaneously	1
Papillary Necrosis	2		
Tuberculosis	1	Atrophic Kidney and Hypertension	1
Systemic Disease			
Hypertensive Malignant Nephrosclerosis	1		
Arteriolar Nephrosclerosis	2	*Vascular*	
Rheumatoid	1	Caval Thrombosis	1
Lupus	1	Aortic Graft	1
Diabetic Nephropathy	1	*Poisoning*	
Gouty Nephritis	1	Phenacitin Nephritis	1

Polycystic Disease – Four patients had polycystic disease. One of these was a three weeks old infant with small kidneys (26 and 16 grams) composed essentially of masses of dilated tubules. In a 36-year-old man with normal BUN and a palpable renal mass, the diagnosis of cystic disease was only established by exploration. In two patients in the fifth decade, there was elevation of BUN and microscopic hematuria. In these more advanced cases, the diagnosis was readily established by retrograde pyelograms. In the three adults in the group, the prognosis was considered poor for long-term survival.

The remaining eighteen cases are listed in Table 1. The two vascular cases are actually extra-renal in origin. The majority of the remainder can be divided between infectious disease and renal insufficiency accompanying systemic disease. The infectious disease became manifested at an older age (average 73 years). In systemic disease (other than arteriolar nephrosclerosis) the average age was 48 years. In the whole group, there were eight hospital deaths.

Discussion

The tabulation of these cases of renal disease has been undertaken to, estimate the relative incidence of these problems, evaluate our present care, and to plan for the

*From the Urology and Research Services Maine Medical Center, Portland, Maine 04102.

TABLE 2

CLASSIFICATION OF RENAL DISEASE PATIENTS

Disease	*Total Number*	*In-Hospital Deaths*	*Prospective Candidates for Dialysis or Transplant*
Acute Glomerulonephritis	8	0	4
Chronic Glomerulonephritis	13	3	11
Nephrotic Syndrome	8	1	1
Polycystic	4	0	3
Infectious and Systemic Disease	18	8	1
	51		20

future. The first two columns in Table 2 indicate that glomerulonephritis is the major single cause of renal failure. Also, a number of the nephrotic cases may also be attributed to the chronic phase of glomerulonephritis.

The substantial number of cases of acute glomerulonephritis seen within the last year indicate that antibiotics have not diminished this problem. The other cases of renal failure in this study are distributed between congenital, infectious, and systemic etiologies. Here the emphasis is on a complete diagnostic workup and really adequate follow-up.

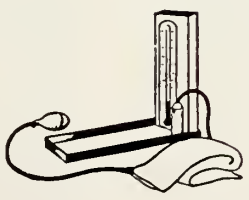
Regarding the present care of patients with renal failure, two general principles came to attention which bear re-emphasis. The patient with chronic disease cannot conserve salt or water. The solute concentration and the urine volume are fairly fixed. The loss of sodium and potassium in these patients is often accentuated by the use of low sodium diets and diuretics. Unless there is edema or very low urine volume, these patients should be allowed the usual five to ten grams of salt in their diet. When they do become desalted and dehydrated by a medical regime or by an intercurrent illness, the resulting fall in circulating volume leads to very rapid renal decompensation. Unless recognized and treated vigorously these patients often progress to shock and advanced uremia which is intractable even to dialysis.

The other situation which is frequently not recognized promptly is papillary necrosis. These patients present with flank and abdominal tenderness, fever, heavy sediment in the urine, many clumps of white cells microscopically, a high white blood count (18 to 25,000), and rapidly rising BUN. Urine and blood cultures should be taken immediately and antibodies (cephalothin) started. Though this process is reversible, the mortality runs about fifty percent. Of the five "pyelonephritis" and papillary necrosis cases in this study, there were three deaths. Other patients prior to this series come to mind, many of whom have gratefully returned to their usual duties.

The larger problem of what can be done or what should be done for these patients with end stage disease remains unanswered. About half of them can be supported with peritoneal dialysis and regain a compensated metabolic state that will last one to six months. This is especially true if the case is uncomplicated by hypertension or heart failure. However, attempts to repeat this form of palliation are generally not successful. This approach even with its limited objectives requires expensive hospitalizations and a large amount of professional time. It does not always work and it certainly solves no problem for the average thirty to forty year old patient.

What is needed is a well-equipped and staffed center where these patients can be expeditiously hemodialyzed to an optimal state of health and thoroughly evaluated. Those in whom serious associated disease preclude rehabilitation would be returned to chronic care. Other patients would be supported with periodic dialysis. This service is being established for individual patients under the supervision of community hospitals in many parts of the country.

The objective of this chronic dialysis generally is kidney transplant. It is a reality that patients are being transplanted. Four patients from Maine, two by referral from this hospital, have been successfully transplanted. A dozen more suitable candidates have recently succumbed for lack of access to a dialysis or transplant program. The time has surely arrived to give these patients more real help.



Retained Common Duct Stones

W. Edward Jordan, Jr., M.D.

One of the most challenging and difficult problems with which the surgeon must deal from time to time is that of retained common duct stones. Whenever the surgeon undertakes biliary tract surgery, he is faced with a decision in regard to whether or not the stones have found their way into the biliary duct system. It is his responsibility at the operating table to be sure that at the completion of the operation, the major biliary radicals are free of obstructing calculi.

Stones occur within the common duct at the time of cholecystectomy in a varying percentage of patients. Some authors have reported stones to be present in as high as 40% of gallstone patients, however, others feel that the percentage is a great deal lower than this.

Indications for exploring the common duct have been fairly well worked out.[1] They include the presence of a dilated common duct that is 1.2 cm. in diameter or greater; a history or actual presence of jaundice; pancreatitis; suspicious or positive findings on palpation of the duct; and the presence of small stones within the gallbladder. Whenever any of these situations are found, the common duct should be explored.

It is well known that the longer that biliary tract disease has existed, the higher the incidence with which stones will be found within the common duct. In a patient in the seventh and eighth decade of life, the biliary tract disease has usually been in existence over a period of many years and the incidence of common duct stones is high.[2]

The symptoms of common duct stone include pain with colic and back radiation and the presence of jaundice.

When cholecystectomy is performed, it is necessary to expose the junction of the cystic duct and the common duct. If this is done properly, so as to perform a safe cystic duct ligation, there is little further exposure required to perform a common duct exploration.

There are occasions in everyone's experience when stones are missed and left behind within the ductal system. No certain method has ever been found for preventing this. Reports of retained stones vary between 2% and 20% of common duct explorations.[3] It is interesting to note that failure to remove all the stones that are present within the ductal system is more common than failure to explore a duct which is later proved to have stones. Thus, judgement is superior to technique.

Interesting Cases of Retained Common Duct Stones

An 81-year-old white male, was admitted to the Fairview Hospital on January 1, 1962 with severe abdominal pain of seven days duration. Past medical history revealed pulmonary emphysema and arteriosclerotic coronary artery disease, functional, Class III. Physical examination showed the abdomen to be very tender with a palpable mass in the right upper quadrant. Because of rising white count and severe abdominal pain, laparotomy was performed and a gangrenous gallbladder with localized perforations was found. A cholecystostomy was performed with removal of a large number of large faceted stones from within the gallbladder. Postoperatively, the patient had an attack of Staphylococcus enterocolitis which subsided with the administration of Erythromycin® but otherwise he progressed well. A cholangiogram, taken through the cholecystostomy tube, on the 18th of January, was reported as revealing a normal common duct. The cholecystostomy tube was removed and the patient was discharged. In March of 1962, the patient was brought back for elective cholecystectomy. This was performed and a common duct exploration was carried out. However, no stones were recovered from the common duct. A T-tube was left in the duct and a postoperative T-tube cholangiogram revealed two faceted stones in the common duct. These were moderately large stones, and on retrospective review of previous x-rays, it was felt that they had probably been in the left hepatic duct at the preoperative cholangiogram. The patient's medical condition was poor, and he was followed for a period of seven or eight months on T-tube drainage. During that period of time, the number of stones within his common duct increased remarkably. In spite of common duct drainage, he had considerable pain in the right upper quadrant and was subjected to re-operation in February of 1963, at which time ten large and many small stones were removed from the duct. Because of the possibility of residual stones being within the dilated interhepatic duct, a cholecystoduodenostomy was performed, leaving a large window between the common duct and the duodenum. The patient had a benign postoperative course, and subsequent x-rays revealed no further stones within the ductal system. He has remained well as far as the gastrointestinal tract is concerned in the past two years.

A 30-year-old white female was admitted to the Fairview Hospital in September of 1963 with a diagnosis of chronic cholecystitis because of pain in the lower chest and radiation into the back. There was a questionable episode of jaundice in June of 1963, but this had not been documented as far as serum icteric indices were concerned. A cholecystectomy was carried out on September 13 and a common duct exploration was performed because of the presence of small stones within the gallbladder. No stones were recovered from the common duct. The sphincter was dilated up to 5mm in size and a small T-tube was placed within the duct. The postoperative T-tube cholangiogram revealed two small filling densities within the common duct. Both of these were small in size and it was felt that it would be possible for them to be spontaneously passed. Clamping of the T-tube following this resulted in two episodes of biliary colic, requiring narcotics for relief, following which the patient had no further pain. She was discharged from the hospital and returned one month later for T-tube cholangiogram which revealed the common duct to be empty of stones.

Discussion

These two illustrative cases, common duct stones present at exploration, were missed by the operator. In case number one, the stones were later discovered to have been within a dilated hepatic duct which was not properly visualized at the time of the cholangiogram. These stones later dropped down out of the hepatic duct and lodged above the T-tube. There was no question of

whether or not these stones could pass spontaneously, as they were too large. The patient's medical condition did not permit prompt re-operation and prolonged T-tube drainage was employed. During this time, the number of stones increased from two to ten. I was concerned lest that at re-operation I should again fail to empty the common duct, knowing that small stones could be present in the dilated interhepatic duct, which could not be reached with instruments. For this reason, at the time of re-exploration, a cholecystoduodenostomy was performed. In the presence of a dilated common duct, this is a relatively simple procedure. The common duct is sutured to the duodenum with a posterior row of interrupted silk. An incision is made in both organs, an inner layer of continuous catgut is placed, and an anterior layer of interrupted silks very much as in an intestinal anastomosis is also placed. This leaves a window about one and one-half centimeters in diameter through which any stones that remained in the biliary system could easily fall into the duodenum. I believe that this is a sound therapeutic procedure in the face of stones that may exist within the interhepatic ductal system and cannot be reached at time of exploration.

Case number two illustrates small stones within the duct system. In this case, the sphincter of Oddi had been dilated. It is my feeling that this should always be done. It had been dilated here to a size which was larger than that of the stones and it was quite reasonable to expect them to spontaneously pass. A small T-tube had been inserted, permitting stones to pass the T-tube and go down to the vicinity of the sphincter of Oddi through which they were easily passed. No effort was made to irrigate the tube, to put chemicals down the tube, or to dissolve the stones. The Best Flush regime has often been mentioned, particularly the part which includes the insertion of ether into the T-tube. I mention this only to say that I believe it would be extremely irritating to the ductal system. I do not believe that it would dissolve the stones in the concentration that it would reach the common duct. I also believe that its function would be to increase pressure within the duct, and thus expell the stones through the sphincter of Oddi. In case number two, the sphincter of Oddi was easily dilated at the time of operation, and thus it was expected that the stones would pass; and they were given an opportunity to do so, which they did.

Several suggestions can be offered for the avoidance of this difficult situation. The first suggestion is that biliary tract disease be submitted to surgery at the earliest possible time. It is not good practice to permit patients with known gallstones, who have no medical contra-indications to surgery, to continue to carry them. The incidence of severe biliary tract disease resulting from this is very high. The patient who is operated on in the early stage of cholelithiasis, and has a cholecystectomy, is almost certainly cured of his or her disease. As the decades pass, the incidence with which this disease has spread to the extrahepatic biliary ducts increases progressively.

The second suggestion to prevent this complication is the careful performance of common duct exploration. The duodenum should be kocherized so that the interpancreatic portion of the duct can be carefully palpated with a catheter or an instrument in place. When the common duct it opened, it is mandatory that the surgeon demonstrate the patency of the sphincter of Oddi. Repeatedly, I have opened the duodenum and incised the sphincter and on several occasions have removed a small fragment of stone which is impacted in this area. The transduodenal sphincterotomy adds very little to the procedure and should certainly be done unless a dilator of three or four millimeters can be easily passed into the duodenal lumen.

The question should be discussed as to whether or not operative cholangiography would assist at the prevention of this complication. Operative cholangiograms are simple to perform; and I believe every surgeon, performing biliary tract surgery, should be familiar with them and have the facilities available to perform them. However, I do not do them routinely. It is perfectly possible to miss the stones on a good cholangiogram. This was done in case number one when the cholangiogram done through the cholecystography tube with good technique in the X-ray Department, still missed the presence of two stones within the duct system. It is interesting to note that in both of these patients, the stones were subsequently demonstrated by x-ray examination, while a T-tube was present in the duct. When faced with this situation, I do not believe that the T-tube should be withdrawn until the duct has been shown to be empty of stones.

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Three Years' Clinical Experience With Indomethacin

ALBERTO MIYARA, M.D.

SYNOPSIS

Indomethacin therapy in a large series of office patients with rheumatic and related inflammatory diseases was judged highly satisfactory, when two-thirds of the group showed a good response to treatment. Side effects appeared in 31 patients but were not severe and spontaneously disappeared in seven. Laboratory tests made in 19 patients revealed that seven had developed occult bleeding; in two others pre-existing melena continued. Most of the patients had received other medication before being given indomethacin, and 35 continued to receive other medication concomitantly.

As an internist with considerable interest and practice in rheumatologic disease,[1–4] the author decided to assess clinically the non-steroid anti-inflammatory compound, indomethacin.* The author was privileged to see the results of the investigation of Dr. B. Norcross[5,6] before he published them, and these results, together with the obvious advantages of a non-steroid anti-inflammatory drug, prompted this study.

MATERIALS AND METHODS

As patients came to the office for treatment of rheumatoid arthritis, osteoarthritis and gout, they were included in the study. Later, other related diseases were added as the author gained experience with the drug. A total of 156 patients (69 men and 87 women) were treated with indomethacin. Their ages ranged from 23 to 92 years; the majority (79%) were between 40 and 69 years old.

The study lasted 40 months. Fifty-eight percent of the patients were treated for less than 3 months, the remainder for periods varying up to 39 months (Table 1). The various rheumatologic and related disorders included in the study and the number of patients in each category are shown in Table 2.

Indomethacin was given in capsules of 25 mg. and 50 mg. The starting dose for most patients (136) was 25 mg. t.i.d., and dosage was maintained at this level in 103 patients. The remainder received daily doses ranging from 25 mg. to 200 mg. (50 mg. q.i.d.). The number of patients at various maintenance dosages and the duration of treatment of each group of patients are shown in Table 3.

Reasons for changing the dosage were: improvement of the patient, occurrence of side effects, or ineffectiveness of the initial dosage. Use of the drug was continued despite adverse reactions when these were not severe or when they were considered to be outweighed by the beneficial effects. However, in some cases, the drug was discontinued, despite its evident benefits, when the side effects became troublesome.

One hundred and ten of the 156 patients had previously received one or more of the following treatments: salicylates, gold, ACTH, steroids, phenylbutazone, probenecid, chloroquine, and physiotherapy. These treatments had been given for from two days to 30 years. During treatment with indomethacin, 35 patients re-

*Indomethacin, INDOCIN®, Merck Sharp & Dohme, West Point, Pa.

TABLE 1

DURATION OF THERAPY

Duration	*Number of Patients*
1 Week or Less	18
2 to 3 Weeks	21
1 Month	20
2 Months	20
3 Months	11
4 to 6 Months	19
7 to 12 Months	26
1 to 2 Years	10
2 to 3 Years	10
>3 Years	1

TABLE 2

DISORDERS TREATED AND NUMBER OF PATIENTS WITH EACH DISORDER

Condition	*Number of Patients*	*Associated with OA*	*Associated with RA*
Osteoarthritis	102	—	—
Rheumatoid Arthritis	33	3	—
Gout	9	4	—
Sciatica	5	—	—
Psoriasis	4	3	1
Bursitis	3	1	—
Torticollis	3	—	—
Epicondylitis	2	—	—
Periarteritis	2	—	—
Psoriatic Arthritis	2	1	—
Allergic Arthralgia	1	—	—
Carpal Tunnel Synd.	1	—	—
Myositis	1	—	—
Hereditary Multiple Diaphyseal Sclerosis	1	—	1

TABLE 3

DOSAGES AND DURATION OF THERAPY

Maintenance Dose	*Number of Patients*	*Duration of Therapy*
200 mg./day	10	<1 week to >39 mos.
150 mg./day	14	<1 week to 23 mos.
100 mg./day	18	<1 week to 11 mos.
75 mg./day	103	<1 week to 33 mos.
50 mg./day	9	1 week to 1 year
25 mg./day	2	7 mos. to 30 mos.

Fig. 1

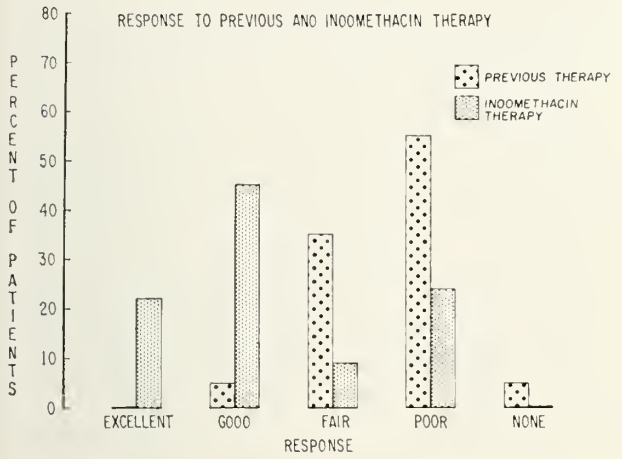
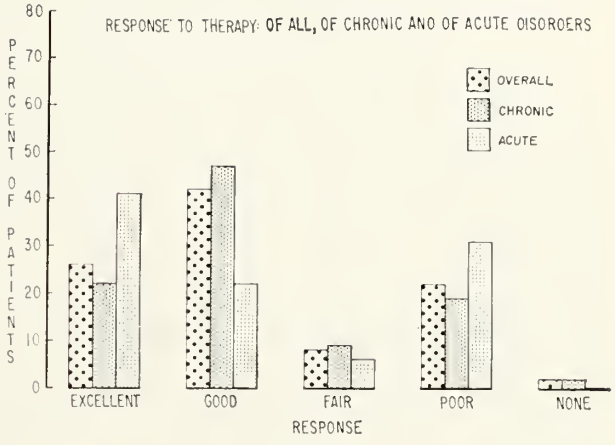


Fig. 2



ceived concomitant medication (gold, salicylates, tolbutamide, insulin, steroids and an antihypertensive drug) for differing periods.

Results

The effectiveness of indomethacin was judged according to subjective evidence of pain relief and objective improvement in joint function, as gauged by range of movement and reduction of swelling. Objective results and the patient's subjective response were combined for an overall evaluation, which the author graded as follows: *Excellent,* complete subjective relief of symptoms and objective improvement in the diseased joints; *Good,* more than 50% subjective relief of symptoms and objective improvement in the affected joints; *Fair,* subjective relief of symptoms without objective improvement in the joints; and *Poor,* a minimal degree of subjective improvement.

Indomethacin therapy produced Excellent results in 41 patients, Good in 65, Fair in 13 and Poor in 34. Results in three patients were classified as "Insufficient Trial," because they had not received the drug long enough for its effect to be fully evaluated.

Of the 110 patients who had previously taken other medication for their inflammatory conditions, 80 improved with indomethacin, 22 felt no change, and 9 became worse. Whereas none was considered to have had an Excellent response to previous medication, 24 were graded Excellent after taking indomethacin. Only six were judged to have had a Good response to previous medication, but 50 were graded Good on indomethacin. The number of those who had previously been Fair decreased from 39 to 10 (Fig. 1).

As shown in Fig. 2, acute conditions responded better to indomethacin (41% Excellent) than did chronic conditions (22% Excellent). If, however, the Excellent and Good results are combined for both the acute and the chronic groups, the responses are much the same: 63% Good/Excellent in acute conditions as compared with 69% in chronic conditions. Altogether, 106 patients (68%) had Good or Excellent response to indomethacin.

Table 4

Adverse Reactions to Indomethacin

Reaction	*Number Reported*
Headache	12
Nausea	10
Gastritis	10
Abdominal discomfort	6
Vertigo	6
Vomiting	2
Palpitation	1
No. of patients reporting adverse reactions	31
No. of patients with no adverse reactions	125

Table 5

Laboratory Results

	Liver		Renal	Hematology	Clinical Chemistry		Guaiac	
	No Change	Positive Ceph. Flocc.	No Change	No Change	No Change	Increased BUN	Negative	Positive
Number of Patients	18	1	19	19	17	2	10	9

Of five patients who were being treated with steroids at the start of the study, two were able to discontinue steroids after taking indomethacin, two others were able to have dosage reduced, and one continued at previous dosage.

Thirty-one patients reported adverse reactions (Table 4), of which the most common was headache (12 patients). Three of the 12 said they had a headache at the start of treatment only. One patient complained of nausea and gastric distress but had no further complaint after the medication was temporarily stopped and then resumed at a lower dosage. A pre-existing ulcer in one patient was not aggravated by indomethacin.

Laboratory tests (Table 5) were made in 19 patients for study of liver function, renal function, blood chemistry and blood in the stool (guaiac test). Of the nine patients found to have positive guaiac tests, one became positive at the end of treatment, one was positive at the

start of the study and became negative, and two were positive at the start of the study and remained positive.

Conclusions

The majority (68%) of the 156 patients given indomethacin showed Good or Excellent improvement on the drug. The limited nature of side effects, neither severe nor unduly frequent, compares favorably with steroids in the long-term treatment which most of these patients require.

During previous treatment only eight of the patients had been rated as Good, and none Excellent; but after taking indomethacin 41 were rated Excellent and 50 Good. The drug was judged to be an effective agent in the improvement of rheumatologic and related conditions. The results indicate that its effect is particularly beneficial in acute inflammatory conditions.

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Monday, June 10

- General Scientific Session
- Specialty Groups
  - Maine Chapter, American College of Surgeons
  - Section on Ophthalmology
  - Maine Society of Clinical Hypnosis
  - Maine Thoracic Society and the Maine Society of Internal Medicine
  - Maine Society of Anesthesiology
  - Maine Psychiatric Association
  - Maine Chapter, American Academy of Pediatrics

Tuesday, June 11

- General Scientific Session
- Specialty Groups
  - Maine Medico-Legal Society
  - Ear, Nose and Throat Group
  - Maine Radiological Society
  - Maine Chapter, American Academy of General Practice

Monday evening – Annual Banquet
Featured Speaker

Tuesday evening – Lobster Bake
Golf Prizes

WATCH YOUR MAIL FOR PROGRAM DETAILS AND RESERVATION FORMS.

The Journal of the Maine Medical Association

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Across The Desk

Public Health Service Is Funding Some Neighborhood Health Centers

The Public Health Service is about to get into the Neighborhood Health Center Act, until now the exclusive domain of the Office of Economic Opportunity. PHS is working on proposals for slum-based health centers in ten major U. S. cities. About half of these are far enough along to stand a good chance of being funded this year, including proposed centers in Minneapolis; Cleveland; Oakland, Calif., and Chattanooga, Tenn.

In a new concept that PHS planners find exciting, the Equitable Life Assurance Society is going to provide construction financing for two of the centers. These are being planned in cooperation with the mostly Negro National Medical Association. The insurance firm will make low-interest construction loans which will be amortized through the centers' income from Medicaid reimbursement for patient care.

The development comes at a time when OEO is consolidating its Neighborhood Health Centers program. The agency, which has funded 42 centers and has approved planning grants for two others, plans no more new projects this year. Although PHS has asked OEO for advice in setting up its centers, the new project is strictly a PHS show. Many observers feel it will be only a matter of time before the OEO health program is moved to PHS. – *Washington Report on the Medical Sciences,* Mar. 25, 1968

Cost of Medical Care Hearings Called

Senator Ribicoff (D) Connecticut formally announced that his Subcommittee will open public hearings, on April 22, on the "efficiency, economy, and coordination of public and private agencies' activities, and the role of the Federal government in organizing, financing, and delivering health care in America." Senator Ribicoff stated that these hearings would continue over a considerable period of time. . . . In a speech in early March, the Senator said that the Subcommittee would seek answers to these questions: "Do we really have a system of health care in America?"; and "What is the foundation upon which a system of health care should rest?" . . . The Subcommittee intends to survey: Health manpower needs; training institutions; the application of techniques and methods of automation and computer technology; contributions by non-medical resources; and regional health planning. The Subcommittee also intends to assess the massive federal investment of $15 billion (in fiscal 1968) provided to 14 federal departments and agencies for health care activities. . . . In concluding his remarks the Senator indicated, "We need solutions – not scapegoats." — *Legislative Roundup,* Vol. IX, LR 11, Apr. 5, 1968

National VD Survey

In an effort to obtain an accurate measure of the severity of the VD problem in the United States, the American Medical Association, the National Medical Association, the American Osteopathic Association and the American Social Health Association in cooperation with the Public Health Service will conduct the "National Survey of VD Incidence," which will cover the period from April 1 through June 30, 1968.

All practicing physicians in the United States will receive an official questionnaire mailed on July 1, 1968. The tabulated results will be published nationally by the sponsoring organizations. All medical societies have been requested to cooperate by urging physicians to participate in this survey. — *News Release from the American Medical Association,* No. 14, 3/68

National Exams for Medical License

The first *Federation Licensing Examination* (FLEX), which has been in the development stage for more than seven years, will be administered June 18-20, 1968.

About 2,500 applicants are expected to be examined during 1968, although a definite figure is not available at this time. It should be stressed that this is the first

Continued on Page 84



Let's be specific about Campbell's Soups...
and *reducing diets*



There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

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How the X-rays were taken

In the hypotonic duodenograph[1,2] reproduced above, the gastrointestinal tract was relaxed with Pro-Banthine. The duodenum was intubated. Pro-Banthine in a dose of 60 mg. intramuscularly was used to assure prompt aperistalsis and double-contrast visualization was achieved with ordinary barium and air.

The same pharmacologic efficiency has proved of pronounced value in such conditions as: *peptic ulcer, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.*

Contraindications: Glaucoma or severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly males with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

(1) Bilbao, M. K.; Frische, L. H.; Rösch, J., and Dotter, C. T.: Hypotonic Duodenography, Scientific Exhibit, Radiological Society of North America, Chicago, Nov. 27—Dec. 2, 1966.

(2) Bilbao, M. K.; Frische, L. H.; Dotter, C. T., and Rösch, J.: Hypotonic Duodenography, Radiology *89*:438-443 (Sept.) 1967.

SEARLE

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Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma. seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis. *Contraindications:* Hypersensitivity to antihistamines. Not recommended for use during pregnancy. *Precautions:* Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. *Side Effects:* Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. *Dosage:* 1 Extentab morning and evening. *Supplied:* Bottles of 100 and 500.

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State Of Maine

Department of Health and Welfare

DEAN H. FISHER, M.D.
COMMISSIONER

Chemoprophylaxis for the Prevention of Tuberculosis

Antimicrobial drugs, which have revolutionized the therapy of tuberculosis, can also be effectively used in chemoprophylaxis, the prevention of disease in the infected individual. Chemoprophylaxis presumably acts by diminishing the bacterial population in "healed" or invisible lesions of the person taking the drug. It is in reality treatment of infection and prevents clinical disease from developing or relapsing.

A substantial and growing body of scientific data testifies to the value of anti-tuberculosis drugs in prevention of clinical tuberculosis. The extensive trials conducted by the United States Public Health Service show a consistent reduction of morbidity in treated groups; it seems reasonable to expect that chemoprophylaxis can reduce future morbidity from tuberculosis in high risk groups by some 50 to 75 percent. The extensive use of chemoprophylaxis now would likely reduce by 300,000 the total number of cases in the United States in the next fifteen years.

Drugs Used In Chemoprophylaxis – A single drug, isoniazid, is generally used for chemoprophylaxis in a dosage of 300 mg. per day for adults and 10 mg. per kilogram body weight per day for children, not to exceed 300 mg. per day, to be administered in a single daily dose for a period of twelve months.

There are virtually no side effects. The toxicity to this drug is low, apparent in only 0.2 to 0.4 percent of those taking the drug and it is easily reversible. Follow-up studies for periods of up to fifteen years of groups of people who have been treated with isoniazid have revealed no evidence of long term deleterious effects from its use. Isoniazid is also inexpensive.

Persons Recommended For Chemoprophylaxis – Every positive reactor is at some risk of developing active disease. Thus any person found to have a reaction of 10 mm. or more to the Mantoux test, using 5 TU of PPD, should receive chemoprophylaxis whenever he is identified.

Since in the immediate future it is not practical to test and treat the entire population of positive reactors, priorities must be set for public health programs taking into consideration the relative risk of developing active disease, the opportunities of infecting others particularly children, and the resources available in the community. The total cost must also be taken into account.

For certain groups, chemoprophylaxis is mandatory. These groups include certain inactive cases, certain special clinical situations, contacts, tuberculin converters and positive reactors among young children and adolescents.

Inactive Tuberculosis – First priority for chemoprophylaxis should be given to persons with inactive tuberculosis. These include: 1. Ex-patients; persons who have had active tuberculosis and had no drug therapy or had inadequate drug therapy. 2. Persons with roentgenographic findings consistent with healed adult-type pulmonary tuberculosis and a positive tuberculin test. Some persons over age 55 may react negatively to 5 TU of PPD, and a larger dose of tuberculin may be necessary to elicit a reaction.

Note: It is essential to exclude active disease in these groups by bacteriologic examinations, comparison with previous radiologic findings, and other investigations because people with active disease require more intensive drug treatment.

The rate of reactivation among these inactive cases is between 0.5 percent and 2.0 percent a year. Many of these cases are known to health departments. It is a worth while program to review the records of inactive cases, and recall them for assessment of the need for chemoprophylaxis. Such a program directed towards a well delineated group would be more practical than surveying the whole community.

Special Clinical Situations – A person with a positive tuberculin test is in danger of activation or reactivation of tuberculosis in certain clinical situations. Such a person should receive chemoprophylaxis whether or not he has been treated with isoniazid before: 1. if he is placed on corticosteriod treatment; 2. if he undergoes gastrectomy; 3. if he has reticuloendothelial disease such as leukemia or Hodgkins disease; or 4. if he has a period of instability of severe diabetes. In the case of a pregnant woman who has inactive tuberculosis previously

Reprint from the American Thoracic Society by the Division of Tuberculosis Control.

untreated with chemotherapy, or who has roentgenographic shadows consistent with inactive tuberculosis, chemoprophylaxis should be started in the last trimester and continued for a year.

When measles or whooping cough develop in children with a positive tuberculin reaction they should receive eight weeks of chemoprophylaxis if they have been treated before; the course of chemoprophylaxis should be extended to 12 months if they have not received previous treatment.

Contacts – Contacts of recently discovered new active and reactivated cases of tuberculosis show a high incidence of this disease. Contacts should be examined and those diagnosed among the contacts as having tuberculosis should be reported and treated.

All household contacts of a reported active case of tuberculosis should receive chemoprophylaxis for twelve months if their reaction to the Mantoux test with 5 TU of PPD is 5 mm. or more of induration. In such instances, a 5 mm. reaction is most likely the result of exposure to tuberculosis and not a cross reaction due to infection with atypical mycobacteria. Those household contacts who show negative Mantoux tests should be retested every three months until at least three months have elapsed since the last exposure. If the skin test converts, chemoprophylaxis should be instituted.

An alternative approach is to give chemoprophylaxis to all household contacts, including those with negative tuberculin tests. Positive reactors remain on the drug for the full course. Negative reactors should be retested three months after last contact with the active case. If the contact has been assuredly broken and if they are still negative to tuberculin, chemoprophylaxis may be discontinued. When exposure may be continuous it is desirable to give chemoprophylaxis to tuberculin negative contacts for as long as an exposure continues. This may also be advisable in epidemics in closed groups and in situations in which it is impossible to retest the negative reactors at regular intervals.

Other Positive Reactors – In addition to the positive reactors just described, chemoprophylaxis should be given to the following reactors with normal chest films: 1. Converters; known converters of all ages should receive chemoprophylaxis. 2. Certain positive reactors under age 20: chemoprophylaxis is *mandatory* for positive reactors through the age of school entrance and for teenagers because of the relatively high risk attending tuberculous infection in these age groups.

MEDICAL FILMS, COLOR TELEVISION TO BE FEATURES AT 117TH AMA ANNUAL CONVENTION

Approximately 50 medical motion pictures will be shown as part of the scientific program at the 117th Annual Convention of the American Medical Association in San Francisco, June 16-20.

Color television, presented live from a San Francisco-area medical facility, also will be featured.

The medical motion picture program will include the premiere of a new film on Diagnosis of Heart Disease, made with the sponsorship of the American College of Cardiology. Narrator of the film is Tinsley Harrison, M.D., Distinguished Professor of Medicine, University of Alabama, an internationally known authority on diagnosis of the causes of cardiac pain.

Other films to be included: Radiographic Visualization of the Biliary System and Cholecystectomy and Choledochotomy, by Dr. Frank Glenn; Bullet Embolus of the Right Ventricle, by Arthur Beall; Role of the Endometrium in Conception and Menstruation, by Dr. John Rock; and, Cold Light Endoscopy, by Norman P. Schenker of Munich, Germany, an award-winning film made in France, Germany and Austria for U.S. physicians.

Five Scientific Sections are to present programs on color television: Dermatology, case presentations; General Surgery, a surgical program including live telecast of an operation, moderated by J. Englebert Dunphy, Professor of Surgery, University of California; Laryngology, Otology and Rhinology, a program on sinus diseases; Obstetrics and Gynecology, the complete gynecologic examination; Orthopedic Surgery, spine problems in children.

The entire Scientific Program for the 1968 Annual Convention will be published in the May 6 issue of **The Journal of the American Medical Association.**

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Biochemical Parallel Between Placental Tissue and Cancer

BOSTON, MASS. — A startling biochemical parallel between placental tissue and cancer has come to light in research by scientists at Tufts University School of Medicine and New England Medical Center Hospitals and the L. Shattuck Hospital.

The group, under the direction of Dr. William H. Fishman, has found that the placentas (the uterine tissue of the mother to which the fetus is attached during pregnancy) and the few cancers so far discovered were rich in an isoenzyme of alkaline phosphatase.

An enzyme is a protein which catalyzes, or triggers, a specific chemical reaction; and an isoenzyme, as scientists have discovered in recent years, is a delicately altered version of the enzyme. Two different but related isoenzymes may catalyze the same chemical reaction — but each might be effective in different organs, tissues, or species.

This was reported recently by the American Cancer Society, which supports the research by Dr. Fishman and his associates — Drs. Norma I. Inglis, Leo L. Stolbach, and Melvin J. Krant. The U.S. Public Health Service and National Cancer Institute help support the work.

Phosphatases are needed to generate chemical energy and participation in the production of life's essential substances — proteins and nucleic acids. Some phosphatases are active in an acid environment and some in alkaline.

Until a few years ago, scientists supposed that all phosphatases were pretty much alike, especially those which acted in the same acid or alkaline environment. Then researchers, with refined techniques, discovered that there were subtle shades of difference between phosphatases which originated from different organs. The phosphatases manufactured by bone cells or liver were different from phosphatases originating in spleen or heart.

And perhaps the most distinctive of all the phosphatases was the isoenzyme produced by the placenta, PAP, or placental alkaline phosphatase, which pours into the bloodstream during the last three months of pregnancy.

During a routine series of blood isoenzyme tests on a heavy-smoking 30-year-old man with a newly-diagnosed cancer of the lung, the researchers were amazed to find substantial quantities of PAP.

At autopsy, a short time later, the researchers found the cancer had spread to several organs . . . adrenals, spleen, kidneys, lymph glands and brain. Neither the bone nor liver was involved with tumor, and their discovery eliminated these two biggest producers of alkaline phosphatase from consideration as the organ source of the elevated serum alkaline phosphatase.

Sensitive chemical and microscopic tests showed that each of the cancer colonies was rich in PAP, just as the original cancer in the lung was, and this PAP differed from the alkaline phosphatase of the organs in which it was found. The alkaline phosphatase tests supplied the clincher and proved that the patient's tumor cells were producing PAP.

The group will continue to check cancer patients as a means of discovering more of these PAP-producing tumors. Perhaps, present methods of detecting PAP could be improved and if they can be, there is a reasonable expectation that PAP measurements will become increasingly valuable to the doctor in solving problems of diagnosis and of therapy of cancer.

American Cancer Society News Service Release

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Cardiac Pacing And Acute Heart Block

Overwhelming acceptance of the intensive care unit concept has prompted a reevaluation of the roles of drug therapy and cardiac pacing in the treatment of acute heart block . . . it is now evident that cardiac pacing is a vital component in the management of advanced heart block.

Successful resuscitation of ventricular asystole by pacing through the closed chest wall was described 15 years ago. . . . However, within the past few years, this method has fallen into disfavor, probably because of the following three factors: (1) external pacing cannot be used as a prophylactic measure; (2) some investigators contend that external pacing is ineffective in acute myocardial infarction after 15 or 30 seconds of asystole; (3) introduction of endocardial pacemaking has provided a remarkably effective technique . . . in a recent symposium on the management of acute myocardial infarct, most participants assigned a minor role to this technique, (external pacing).

. . . the majority of clinicians consider direct stimulation of the heart through a catheter electrode to be the method of choice for the treatment of acute heart block. Ordinarily, the transvenous catheter is placed in position under fluoroscopic control. However, "blind" positioning may be used when it is impossible to transfer the patient to an x-ray laboratory.

. . . acute heart block in the presence of myocardial infarction is associated with a distressingly high mortality despite . . . newer pacing techniques. Ten percent would appear to be a small improvement in survival rate, but, in view of the large number . . . this could represent a saving of 10,000 to 15,000 lives annually. Therefore, . . . cardiac pacing must be viewed as a major contribution to the care of the patient with myocardial infarction.

Submitted by Jacob B. Dana, M.D., Maine Heart Association.
Reference – Editorial, JAMA, Vol. 203, page 356, 1968.



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Contraindications: Porphyria, peptic ulcer, ulcerative colitis, mental depression, sensitivity to either component. *Precautions:* Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthesiologist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT.

Adverse Reactions: Drowsiness, skin rash, "hangover," systemic disturbances, increased salivation and gastric secretion, nausea, vomiting, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis and optic atrophy), dryness of mouth, syncope or dizziness, epistaxis, purpura secondary to thrombocytopenia, asthma in susceptible persons, nasal congestion, weight gain, and impotence or decreased libido.

Usual Adult Dosage: Initially, 1 to 4 tablets daily for one week; maintenance, 1 to 2 tablets daily.

McNeil Laboratories, Inc., **McNEIL** Fort Washington, Pa.

Necrologies

Edwin Kay, M.D.

1889-1968

(Eulogy for Dr. Edwin Kay, given by Rev. John R. Schroeder at the funeral service on Feb. 7, 1968)

Thus fortified in heart and mind with these words of holy scripture, we are gathered to commemorate the passing from this life into that Larger Life of our beloved Edwin Kay, born March 27, 1889 and died Feb. 3, 1968.

We gather to pay tribute to this fine life lived out in our midst. We come not to invoke God's presence, as though He were an outside guest to be invited but to celebrate what God has wrought in Him, for surely there was much of the Master's image in this man.

In these days when individual initiative is all too rarely found, here was a man who worked his way through McGill University and Medical School, tutoring fellow students and boning up on tomorrow's assignment as he delivered bread from house to house.

Not only did he do this with little or no financial help, though with considerable encouragement and loving pride of his parents, but he saved, as soon as he could, for their passage from England to this country where they spent their remaining years.

Surely the people of West Paris rise up and call him blessed for it was there that he began his general practice, a typical country doctor, available day and night, by horse and buggy and later, in the winter by the snowmobile, a converted Model A Ford that offered a kind of tractor tread and front end skis for the snow-packed roads.

It was not merely that he served them so faithfully during those years but later, having moved to Lewiston where he began to specialize in gynecology and obstetrics, when doctors became scarce during the war years, he volunteered two afternoons and evenings a week to serve his former neighbors at West Paris. His sons remember driving him on some of these trips when he would catch a cat-nap on the way and awake, ready to meet the needs of his patients with typical mental vigor and that affable warmth that ministered to the whole patient, and not merely the particular ailment.

Many of you in this city know him for his years of service in private practice and at St. Mary's Hospital where he has been on the senior surgical staff and, until his death, was chief of gynecology.

Only his family and a few close friends know of the many kindnesses shown to friends in need, men set up in business, as well as medical ministries given freely to the underprivileged needy.

As his sons showed me around his attic room and told me of his many interests, I marvelled at the healthy many-sidedness of his curiosity and achievements. I saw clocks, many of which he had finished or repaired. I saw a trophy cup, paying tribute to his competence as a sea-farer and learned that he was active in the Coast Guard Flotilla of Portland as well as being an honorary member of the Lewiston-Auburn Flotilla 103.

There was his equipment, used as a ham radio operator and text books still open in an advance course in electronics that he was studying. This childlike wonder and curiosity to explore more and more of his Father's world reminded me of the words of the apostle when he said, "I count not myself to have attained, but I press on. . . ."

There is much, so much more that could be said but such a life needs not the faltering verbal praise of men – your presence here testifies to at least a small portion of those whose lives were enriched because they touched his along the way.

We rejoice with his family in the blessed memories of his life that will ever be a strong incentive to continue in that fine spirit of yoke-bearing and burden-lifting, in the affirmation of the wonder of creation and the grandeur of living a love-invested life in the spirit of the Master.

So even as we rejoice with you, we share at least a portion of your loss, for who has known him that does not feel that the world is far richer for his having lived among us and we are now the poorer for his departure! Yet, if our friend had any fears, it must have been the fear of growing useless, perhaps being stricken with a wasting illness. I think he would have agreed with the poet:

"Let me go quickly as a candle snuffed out at the hey-day of its glow.
Give me high noon and let it then be night -thus would I go."

And though the suddenness of this seemingly indestructible man's passing catches us all unprepared, we can rejoice for him, taken still in his fruitfulness, taken from us to serve in that other realm where God must have need for servants, for Edwin would not be truly joyful if he could not serve and lift.

Surely for such as this, the trumpets of heaven sound in glad token of his arrival and the word of our God be heard, "Well done, good and faithful servant, enter into the joy of Thy Lord."

Because of his love of the sea, the immortal lines of Tennyson seem especially fitting to bespeak his faith and ours:

"Sunset -and evening star,
And one clear call for me!
And may there be no moaning of the bar,
When I put out to sea.
But such a tide as moving seems asleep,
Too full for sound and foam,
When that which drew from out the boundless deep
Turns again home.
Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell
When I embark;
For though from out our bourne of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crossed the bar."

Stephen W. Sanders, M.D.

1912-1968

Stephen W. Sanders, M.D., 55, of Winthrop, Maine died on February 5, 1968. He was born in Lewiston, Maine on February 10, 1912, son of John and Julia Semetauskis.

Dr. Sanders graduated from Jordan High School in Lewiston in 1930, Bates College in 1934 and received his medical degree from Marquette University School of Medicine in 1942. He interned at the Central Maine General Hospital from 1942 to 1943, served in the U.S. Army from 1943 to 1946 and then located in Winthrop where he began his practice in 1946.

He was a member of the Kennebec County Medical Association, the Maine Medical Association and the American Medical Association. Dr. Sanders was a former president of the staff at the Augusta General Hospital and a member of the Augusta General Hospital staff until he retired from practice due to illness.

Survivors include his widow, Mrs. Amelia Sanders of Winthrop; a daughter, Miss Mary Lee Sanders of Winthrop; a son, 1st Lt. William S. Sanders, USAF, stationed at McClellan AFB, California; a sister, Mrs. Elizabeth Loomis of Jacksonville, Florida; a brother, Alphonse Semetauskis of Skowhegan and two grandsons.

County Society Notes

KENNEBEC

The Kennebec County Medical Association meeting was held on January 18, 1968 at the Senator Motel in Augusta, Maine. The meeting was called to order by the President, Richard H. Dennis, M.D.

A resolution was passed favoring a joint meeting annually of this Association with the Kennebec County Bar Association. Another resolution that received favorable action was that approving an annual assessment of $25.00 per year starting January 1, 1969 to cover the cost of dinners for the county meetings. The plan provides that when each county member pays this assessment he will bear no further dinner charges for the nine county meetings each year.

Following the business meeting, Dr. Dennis introduced Mr. Gerald J. Buckley, Account Executive associated with Merrill Lynch, Pierce, Fenner & Smith Inc. Mr. Buckley gave a fascinating analysis of the current financial world and particularly the investment field. His address was followed by a lively question and answer period.

FRANCIS A. SPELLMAN, M.D., *Secretary*

CUMBERLAND

The Cumberland County Medical Society meeting was held at Carolyn's in Cape Elizabeth, Maine on February 15, 1968 with sixty-five members present.

Eugene P. McManamy, M.D. referred to correspondence from Dr. Hanley and from the American Medical Association expressing concern over the dwindling attendance at medical society meetings and the lessened participation by physicians in medical society matters. Dr. McManamy urged the members of the Society to attend meetings and participate, and he expressed his intent to do all in his power to stimulate the involvement of more members.

Dr. McManamy referred to a letter from Ernst & Ernst which summarized the results of a survey of Maine physicians regarding their interest in a professional billing service. The preliminary survey indicated that only approximately 15 percent of the physicians in Cumberland County expressed any interest in this program. Considerable discussion followed of the need and merit for a third-party billing system; and a motion was made, seconded, and carried that the whole matter be tabled.

John R. Davy, M.D. introduced a film describing the Phonocardioscan Heart Sound Screening Program which is to be introduced into the Portland schools in March. He emphasized that the machine is not perfect, but it will allow examining physicians to concentrate on the suspected abnormals rather than devote large amounts of time screening the heart sounds in normal children.

Drs. Alfred E. Swett and Carmel L. Davy were elected to membership in the Society.

Charles R. Glassmire, M.D. reported that Dean Fisher, M.D. had met with physicians in Hancock and Washington counties and that certain of the previous medical care problems have been ironed out. He also encouraged the members to join MEMPAC and to pay special attention to the medical aspects of the forthcoming political campaigns.

Stanley B. Sylvester, M.D. reviewed some of the educational and training materials available from the American Medical Association to assist any members in preparing or implementing specific medical programs. Dr. McManamy announced that the next meeting would include a program of outstanding experts discussing physician participation in the Keogh Bill.

STANLEY B. SYLVESTER, M.D. *Secretary*

HANCOCK

The Hancock County Medical Society met at the Brookside Restaurant in Ellsworth, Maine on February 14, 1968 with twenty-two members and four guests present. The Vice-president, Winston G. Stewart, M.D. opened the meeting in the absence of the President, John D. McIntyre, M.D. He designated Robert D. Wilson, M.D. chairman pro tem because of the nature of the business to be taken up at the meeting.

Dr. Stewart read a memorandum of quotes from the meeting of the Council of the Maine Medical Association in Brunswick on January 14, 1968 concerning the Maternal and Infant Care Project. Pursuant to the directives of that meeting, Dr. Stewart with the help of Robert F. Russell, M.D., had completed a revision from cover to cover of the MIC Project. This had been printed and distributed to all members of the Hancock County Medical Society before the meeting. Dr. Stewart moved and was seconded by Herbert T. Wilbur, Jr., M.D. that this revision be approved by the Hancock County Medical Society. A half-hour discussion followed, largely favorable to the revision. It was indicated that the usual practice of medicine in the two counties, Hancock and Washington, is not interrupted and that the patient is allowed free choice of physician and hospital. The usual and customary fees, and the hospital costs are also supported by the revision. Criticism of the revision was directed at the lack of provision for supervision of government financed Maternal and Infant Care, that is, "quality control." The revised version of the Maternal and Infant Care Project was approved by a vote of 15 to 2. A resolution was then adopted, directed to the House of Delegates of the Maine Medical Association to be considered at its Interim Meeting in April for its approval of the same revision. It was felt by most members present that the revised version presented a constructive and positive counterpart to the negative resolution presented to the House of Delegates from Hancock County a year ago and adopted at the annual meeting of the Maine Medical Association in June 1967.

A meeting of the Hancock County Medical Society was held at the Brookside Restaurant in Ellsworth, Maine on March 13, 1968. Recent developments in the Maternal and Infant Care Program revision were discussed.

The speaker of the evening, Stanley E. Herrick, Jr., M.D. of Damariscotta, discussed Cancer Chemotherapy and Radioisotope Therapy. He outlined and discussed the types of disease that can be expected to be cured, arrested, and palliated successfully with agents presently available. He reviewed the classes of agents and members of each class in present use. His knowledgeable and concise review emphasized that therapy could and should be available throughout Maine at the community level. The diagnostic and treatment criteria are now reliable and can be employed by local practitioners. The diagnostic

equipment and agents could be used with the support of those in Maine who are now becoming expert and familiar with the everyday use in practice of this modality of therapy in relation to the above diseases. His audience greatly appreciated this timely presentation. In the brief discussion that followed, mention was made of the part that Regional Medical Programs might play in enabling physicians to make Chemotherapy available to their patients.

BRADLEY E. BROWNLOW, M.D., *Secretary*

ANDROSCOGGIN

The meeting of the Androscoggin County Medical Society was held at the St. Mary's General Hospital in Lewiston, Maine on February 15, 1968 with twenty-four members present.

Dr. Goodwin read the resolution on the death of Edson B. Buker, M.D. It was voted to enscribe a copy on our records, send a copy to the family and one to the Maine Medical Association.

Thomas F. Shields, M.D. read the recommendations for medico-legal fees which were adopted unanimously after amending paragraph one. All motions were passed and adopted.

John W. Carrier, M.D. spoke of the possibility of a joint meeting with Kennebec County in April. The speaker is to be provided by the American Cancer Society, Maine Division, Inc. with the time and place to be ascertained later.

Dr. Carrier was the guest speaker of the evening. He spoke on Mammography and presented slides demonstrating different lesions with differential diagnosis.

DONALD L. ANDERSON, M.D., *Secretary*

LINCOLN-SAGADAHOC

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges Inn in Wiscasset, Maine on February 20, 1968 at which Edward L. Kinder, Jr., M.D. gave an interesting presentation of the Subclavian Steal Syndrome.

The Lincoln-Sagadahoc County Medical Society meeting was held at The Ledges in Wiscasset, Maine on March 19, 1968. The meeting was called to order by the President, Mary J. Tracy, M.D.

Dr. Fite was elected to membership in the Society.

Dr. Tracy read a telegram from the AMA reminding all physicians to return a Physician Activity Verification Questionnaire sent with the current *AMA News*.

Dr. Tracy then introduced Paul S. Hill, Jr., M.D. who spoke on the role of physicians and the county society in the determination of the future course of medical care in the United States. He stressed the need for local initiative in starting meaningful programs. He mentioned some of the programs which have already been suggested or implemented.

Drs. Tracy and Bostwick introduced the Program Committee chairman, Stanley E. Herrick, Jr., M.D. of Damariscotta, who spoke very lucidly on the Diagnosis and Treatment of Thyroid Disease.

GEORGE W. BOSTWICK, M.D., *Secretary*

SOMERSET

The Somerset County Medical Society met at Whittemore's Restaurant in Skowhegan, Maine on March 5, 1968. At that time the County considered a complaint by a local physician concerning the injudicious use of a subpoena by a local lawyer. The County approved the principle of setting up a county-wide utilization review organization operated by representative physicians in the area.

Paul S. Hill, Jr., M.D., President of the Maine Medical Association, spoke briefly concerning the need to foster more medical manpower both at the physician and nursing level.

Niles L. Perkins, M.D. of Bowdoinham gave the group an excellent review of the recently enacted laws 89-749 and 89-239. He pointed out that at the present time the physicians of Maine are still somewhat masters of their own fate but we must act spontaneously now if we wish to avoid complete supervision in the future.

JOHN P. DOW, M.D., *Secretary*

YORK

The York County Medical Society meeting was held at The Henrietta D. Goodall Hospital in Sanford, Maine on March 13, 1968 with eighteen members and three guests present.

Following a social hour and dinner, the meeting was called to order by Marion K. Moulton, M.D. in the absence of the President, Eugene P. Wolfahrt, M.D.

Mr. Robert G. Grondin, the guest speaker, was introduced by Dr. Moulton. Mr. Grondin, who was assisted by Mr. Noysen, spoke on the Keogh Bill and showed lantern slides.

Mrs. Ruth Allen gave a very interesting talk on mental retardation and Charles R. Glassmire, M.D. of Portland, Councilor of the First District, spoke briefly relative to meetings of the M.M.A. Council.

The next meeting will be held at the Notre Dame Hospital in Biddeford, Maine in May instead of June.

A committee consisting of Drs. Carl E. Richards, Paul S. Hill, Jr. and Roger J. P. Robert was appointed to act as a nominating committee and to meet with the lawyers to arrange for a joint meeting.

CHARLES W. KINGHORN, M.D., *Secretary*

PENOBSCOT

A meeting of the Penobscot County Medical Society was held at the Oronoka in Orono, Maine on March 19, 1968. The meeting was called to order by the President, Leonard G. Miragliuolo, M.D.

The guest speaker was Paul Numerof, Sc.D., Director of the Division of Nuclear Medicine at E. R. Squibb Co. He first minimized whole body radioactive dosage in association with scanning, then gave an illustrated review of various scanning procedures. These included scans for placental location, brain, bone, spleen, lung, liver, and pancreas. He alluded to the latter, done with selenomethionone, as a historic development in scanning. A business meeting followed.

George W. Wood, III, M.D. had three messages. He briefly mentioned a budget meeting of the Maine Medical Association Council, reported that a newly defined MIC program was being prepared, and made an eloquent plea that physicians be more interested in good government through participation in MEMPAC.

It was moved that the Society accept an offer by Bradley E. Brownlow, M.D., representing the Maine Chapter of the American Academy of General Practice, to have a joint meeting in October. Financing is available from the Public Health Service. The meeting was concluded.

WILLIAM M. SHUBERT, M.D., *Secretary*

New Members

KENNEBEC

Peter J. Leadley, M.D., Dept. of Health and Welfare, Augusta, Maine 04330, Feb. 15, 1968

LINCOLN-SAGADAHOC

Marcia Fite, M.D., Pemaquid Point, Maine 04558, Mar. 19, 1968

OXFORD

Adwaita K. Ganguli, M.D., 523 Somerset St., Rumford, Maine 04276, Mar. 28, 1968

News, Notes and Announcements

Department of Health and Welfare
Division of Maternal and Child Health
Including Services for Crippled Children

(By Appointment Only)

Orthopedic Clinics

Augusta – Augusta General Hospital
1:00 p.m.: Apr. 25
Bangor – St. Joseph Hospital
9:00 a.m. and 1:00 p.m.: May 23
Half-day sessions: 1:00 p.m.: Apr. 25, June 27
Fort Fairfield – Community General Hospital
9:00 a.m. and 12:30 p.m.: May 13
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: May 14
Houlton – Aroostook General Hospital
9:00 a.m.: May 16
Lewiston – Central Maine General Hospital
9:00 a.m. and Bracing Clinic at 12:30 p.m.
(In conjunction with CMGH): May 17, June 21
Machias – Down East Community Hospital
9:00 a.m.: Apr. 26
Portland – Maine Medical Center
10:30 a.m. (In conjunction with MMC): Every Monday (holidays excepted)
Presque Isle – Arthur R. Gould Memorial Hospital
9:00 a.m. and 12:30 p.m.: May 15
Waterville – Thayer Hospital
9:00 a.m.: Apr. 24, May 22, June 26

Cardiac Clinics

Bangor – St. Joseph Hospital
9:00 a.m.: Apr. 26, May 10, 24, June 14, 28
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Friday (holidays excepted)

Cleft Palate Evaluation Clinic

Portland – Maine Medical Center
10:00 a.m.: May 14

Pediatric Clinics

Bangor – St. Joseph Hospital
1:30 p.m.: Apr. 26, May 24, June 28
Presque Isle – Arthur R. Gould Memorial Hospital
1:30 p.m.: May 29, June 26
Waterville – Thayer Hospital
9:00 a.m.: May 8, June 12

Clinics for Mentally Retarded Preschool Children

Lewiston – Central Maine General Hospital
9:00 a.m.: May 13, June 10
Lewiston – St. Mary's General Hospital
9:00 a.m.: Apr. 22, May 27, June 24
Waterville – Thayer Hospital
9:00 a.m.: May 1, 15, 29, June 5, 19

Convulsive Clinic

Fort Fairfield – Community General Hospital
(To be scheduled)

Cystic Fibrosis Clinics (In conjunction with the CMGH and MMC)

Lewiston – Central Maine General Hospital
9:00 a.m.: May 3, June 7
Portland – Maine Medical Center
9:00 a.m.: May 21, June 18

Hemophilia Clinic

Portland – Maine Medical Center
Appointments made through this office on an individual basis.
Outpatient service at the Maine Coast Memorial Hospital, Ellsworth, for pediatric, epilepsy and orthopedic services will be arranged by appointment only.

Family Planning Clinics

Portland – Maine Medical Center
First and third Thursday, every month. Morning clinic.
Bangor – Eastern Maine General Hospital
First and third Friday, every month. Morning clinic.

Emergency Care and Transportation

The second annual course on emergency care and transportation of critically ill and injured persons sponsored in the Boston area by the American Academy of Orthopaedic Surgeons will be held June 17-20 at Emerson Hall, Harvard University, Cambridge, Massachusetts.

Invited to attend the three-and-a-half day course of lectures and demonstrations are ambulance attendants, nurses, firemen, policemen, safety engineers, rescue squads, public health, civil defense and other officials dealing with the initial handling of members of the public ill or hurt in accidents.

Last year the advanced training meeting attracted registrants from Boston and 130 other cities in 15 states and Canada. The course in June is to be given in cooperation with the Massachusetts Committee on Trauma of the American College of Surgeons.

Comprehensive training of those first on the accident scene is one important step to stem the rising death toll due to trauma, according to Dr. William R. MacAusland, Jr., instructor in orthopaedic surgery, Harvard Medical School, director of the course.

"How the patient is looked after immediately following the accident is often crucial to his life and his recovery," he said.

To furnish this instruction, faculty members of the Harvard and Tufts University Medical Schools, Boston University Law Medicine Institute, members of the Massachusetts State Police, Cambridge Fire Department, Boston City Hospital, Peter Bent Brigham Hospital, Massachusetts General Hospital and others will speak and demonstrate on a wide range of subjects, including shock, resuscitation, cardiac massage, splinting of fractures, and other medical emergencies. Emergency childbirth, suicide prevention, aid to poison victims, extrication from electricity, and even the legal aspects of ambulance transportation will be discussed.

Demonstrations of helicopter evacuation and extrication from crushed autos will also be given.

The course is one of a series being conducted in major cities by the Academy's Committee on Injuries, whose Chairman is Dr. Walter A. Hoyt, Jr., Akron, Ohio.

Members of the Program Committee for the Boston course are Dr. MacAusland, Chairman; and Drs. Milton H. Alper, Assistant Clinical Professor of Anesthesia, Harvard Medical School; Donald P. Dressler, Instructor in Surgery, Harvard Medical School; and William R. Torgerson, Jr., orthopaedic surgery staff, Lahey Clinic.

For information and registration forms, those interested may write to William R. MacAusland, Jr., M.D., 412 Beacon Street, Boston, Mass. 02115.

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PERITINIC®

Hematinic with Vitamins and Fecal Softener

A tablet-a-day provides:

● Elemental Iron (as Ferrous Fumarate)	100 mg
● Dioctyl Sodium Sulfosuccinate (to counteract constipating effect of iron)	100 mg
Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. (Now isn't that a good idea in an iron-containing hematinic? We'll send you samples if you'll send a request on your Rx blank, addressed to Department 150.)

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Augusta State Hospital To Have Open House

This year annual Hospital Day at Augusta State Hospital will be an Open House on May 5, 1968 from 1 p.m. to 4 p.m. Augusta State Hospital serves the counties of York, Cumberland, Androscoggin, Kennebec, Lincoln, Oxford, Franklin and Sagadahoc. An interesting and diverse program has been planned and it is hoped that Doctors, their families and friends will visit the hospital on that day. There will be guided tours of the hospital, exhibits of patient and staff activities, ongoing patient and staff participation in activities, art exhibit and sale, gift shop, and a volunteer recognition ceremony. Refreshments will be served and a supervised nursery will be provided.

The Augusta State Hospital extends a cordial invitation to come to their Open House.

ACROSS THE DESK

Continued from Page 74

time a single examination for medical licensure has been prepared and is being administered for licensure in more than one state.

The Examination Institute Committee of The Federation of State Medical Boards of the United States was responsible for researching and developing the examination, and the National Board served in an advisory capacity and also provided the questions.

Previously, many physicians wishing to relocate and practice medicine in another state were compelled to be re-examined by that state. This has proved to be a constant source of annoyance among physicians in years past. It is hoped that FLEX will not only arrest that and similar problems, but at the same time achieve uniformity in licensing examinations, equivalent levels in the examinations, improvement in the quality of examinations, etc.

"Eligibility for the examination will be limited to those who have completed or nearly completed at least one year of internship or other graduate training as approved by the state board with the provision that the requirement of one year internship or graduate training may be waived in 1968 only, in any state where circumstances require. It is conceivable that the period of this waiver might need to be extended," the Committee stated.

The 3-day, 21½-hour test, which is administered by members of the state boards, will be repeated December 10, 11 and 12. For security's sake, it has been decided to conduct it on the same three days throughout the United States. Scores will be reported directly to the participating states, which will then have the option of interpreting them as they see fit.

Maine is a participating state for the June and December 1968 Exams. Following this the program will be evaluated by the Maine Board of Registration of Medicine. — *News Release from the American Medical Association,* No. 14, 3/68

FOR SALE

DIATHERMY UNIT – The Birtcher Model 850 – Challenger, FCC Type Approval No. D529. (Bought in 1942)

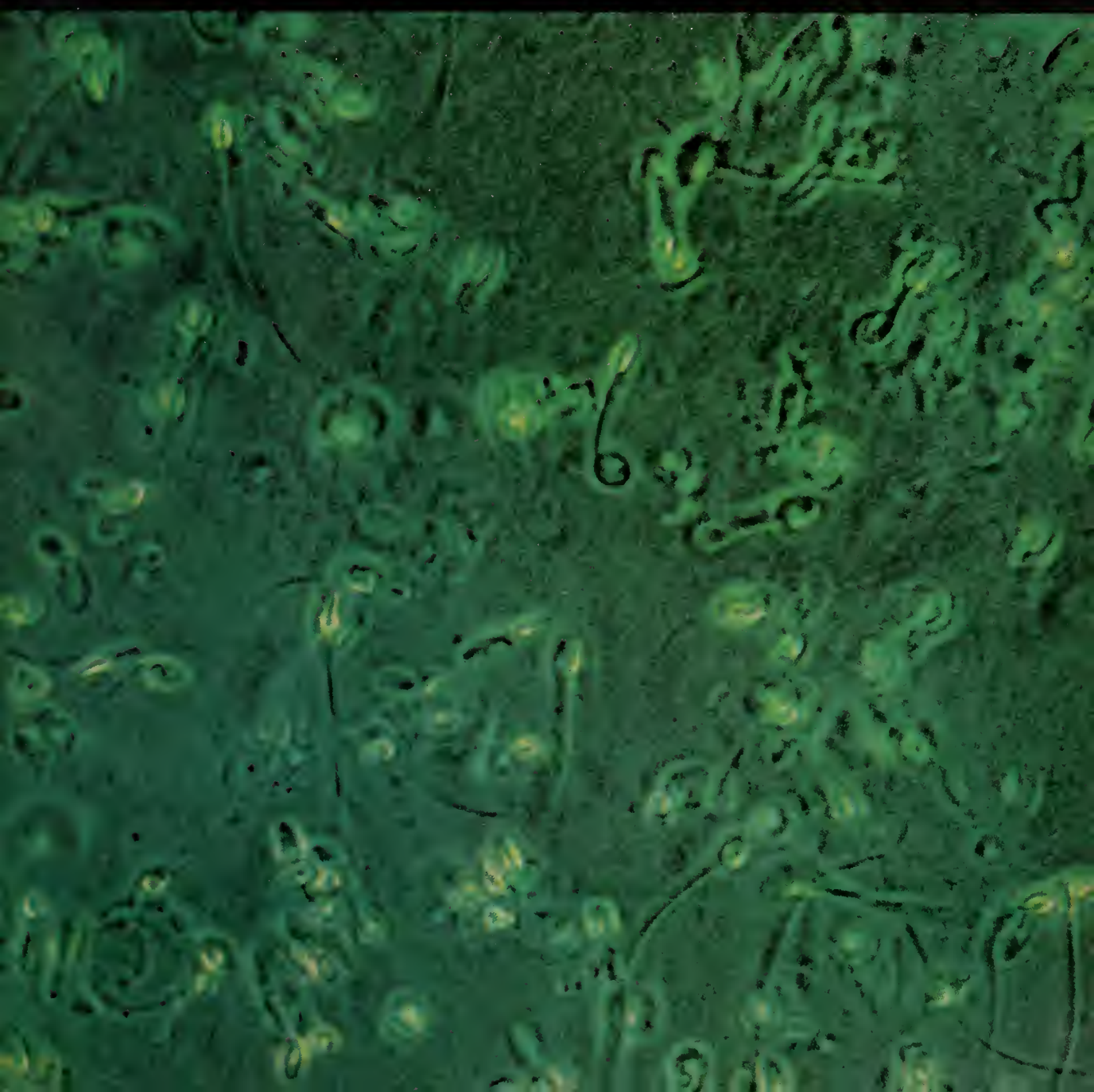
X-RAY MACHINE – Humphreys Roentgen Co., Amp 15, Aurora, Illinois, Cyc. 60, 115 volts, 4-H Model, Serial: B-229.

Inquire: Mrs. Cora J. Pratt, 18 Church Street, Livermore Falls, Maine 04254.

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg. & mestranol 0.05mg)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of NORINYL-1 (norethindrone 1 mg. with mestranol 0.05 mg.) in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with NORINYL-1. Therefore, if such tests are abnormal in a patient taking NORINYL-1 it is recommended that they be repeated after the drug has been withdrawn for two months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibromyomata may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. 5. NORINYL-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, and as in all cases of irregular bleeding *per vaginam*, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged NORINYL-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving NORINYL-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. 11. Because of the effects of estrogens on epiphyseal closure, NORINYL-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with NORINYL-1 may mask the onset of the climacteric. 13. The pathologist should be advised of NORINYL-1 therapy when relevant specimens are submitted.

Side effects observed in patients receiving oral contraceptives: The following adverse reactions have been observed in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretion, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression.

Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation post-treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, itching.

The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has been neither established nor disproved): thrombophlebitis, pulmonary embolism, neuro-ocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, Factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

norethindrone — an original steroid from
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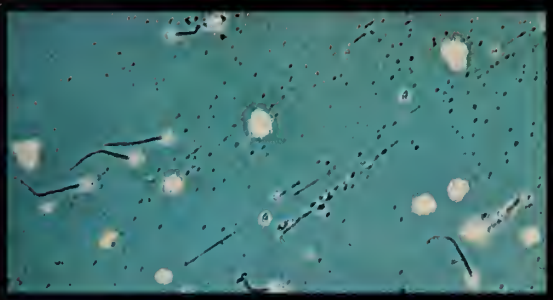
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

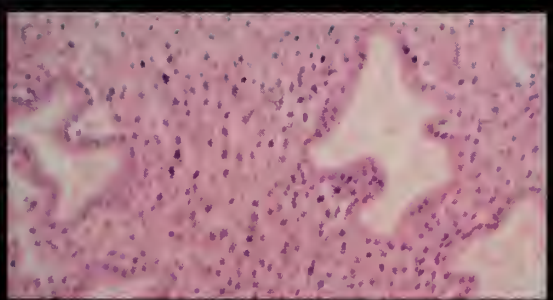
Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.



Spermatozoa appear healthy, active, freemoving.

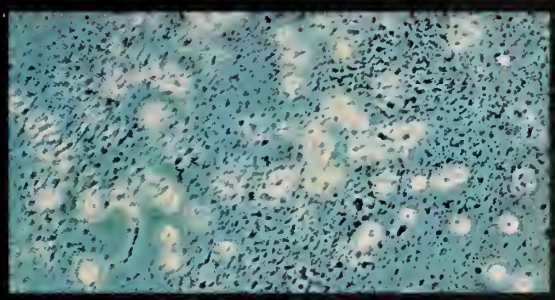


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

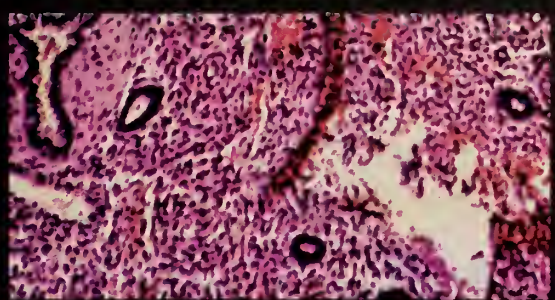
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

Norinyl®-1
(norethindrone 1mg. & mestranol 0.05mg.) tablets

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost



Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant patients, since the drug may cross the placental barrier and adverse reactions which may occur in the adult (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Hygroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Hygroton should be discontinued and potassium supplements given, provided the



Did Dorothy Larson show you her ankles in private?

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chlorthalidone

Your office examination confirmed Mrs. Larson's ankle edema.

You prescribed Hygroton—to get rid of the edema.

And you found that Hygroton is not only effective; it frequently costs less than other equivalent therapy.

A nice way to treat the Mrs. Larsons in your practice.

Hygroton therapy may mean troublesome side effects for some patients. A summary of the prescribing information is shown below.

t does not have marked oli-

special care in cirrhosis or
e ischemic heart disease and
ients receiving corticoste-
ACTH, or digitalis. Salt re-
on is not recommended.
se Reactions: Nausea, gastric
ion, vomiting, anorexia, con-
ion and cramping, dizziness,
ness, restlessness, hyperglyc-
, hyperuricemia, headache,
e cramps, orthostatic hypo-
tension, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.
Average Dosage: 50 or 100 mg. with breakfast daily or 100 mg. every other day.
Availability: White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000.
(B)R46-230-D
For full details, please see the complete prescribing information.

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Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

And let you control the dosage.



Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.
Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; and acetaminophen, 500 mg.

With Novahistine LP tablets and Novahistine Singlet™ tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever. Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

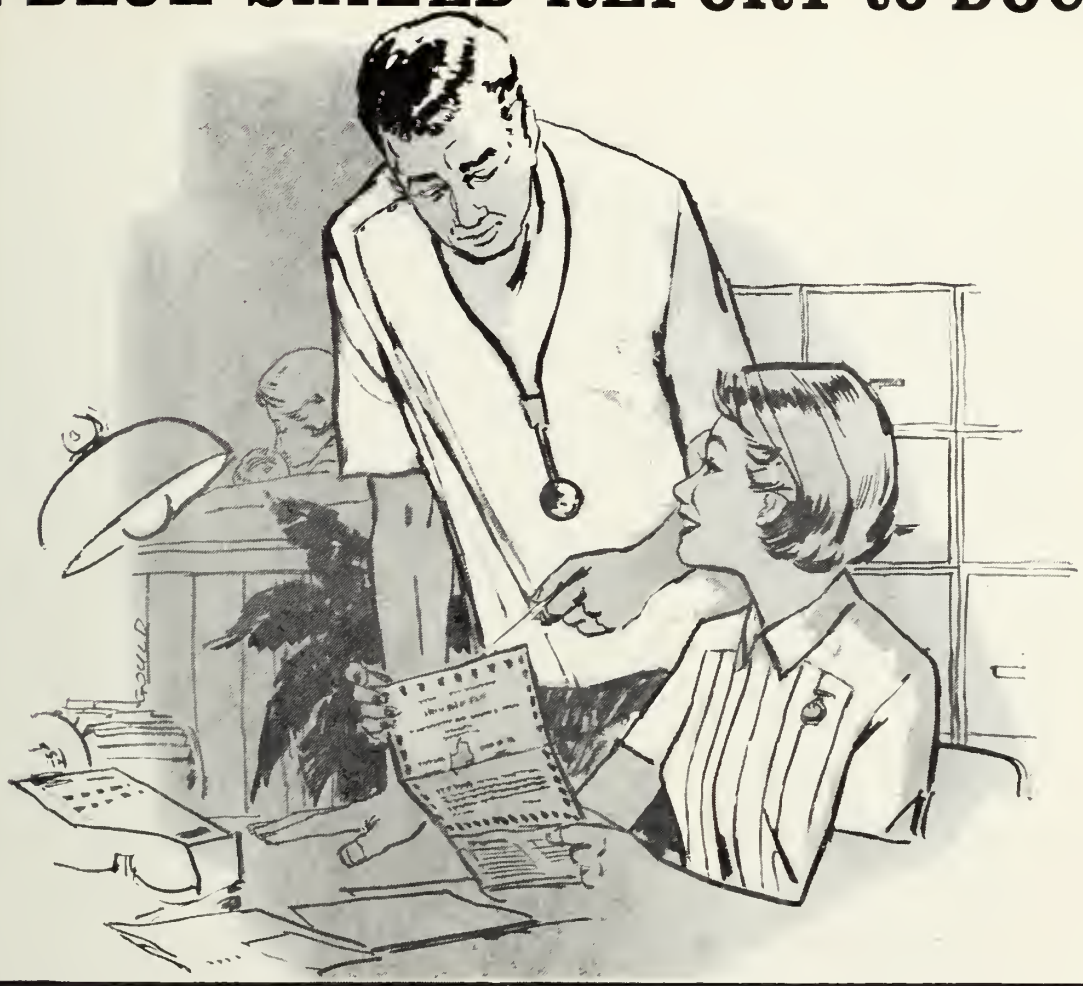
Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

DOW PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS



"Nothing else I've tried seems to work, so I decided to give you a crack at it."

A BLUE SHIELD REPORT to DOCTORS



REPORT # 12

Reminder In Processing Companion Plan Claims

The regular Blue Shield claim form *should not be used* when filing for "Medicare" services.

You are to submit to Companion Plan Blue Shield the Explanation of Benefits received from the Medicare carrier.

Please be sure to indicate on the Explanation of Benefits the patients Companion Plan contract number.

Recommend

With Over 800 Participating MDs

ASSOCIATED HOSPITAL SERVICE OF MAINE

509 FOREST AVENUE

PORTLAND, MAINE 04101





Tissue's healing nicely. Yet anxiety slows his steps toward recovery.

By helping overcome anxiety and tension which can thwart the convalescent's progress, Equanil® often may play an important role in medical and surgical aftercare.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

Wyeth® SERVICE TO MEDICINE

Equanil®

(meprobamate)

Wyeth

Professionally posed.

Easy on the Budget...
Easy on the Mother

Tablets & Elixir

For Iron Deficiency Anemia

FAMOUS Fergon®
brand of FERROUS GLUCONATE

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Subsidiary of Sterling Drug Inc.
90 Park Avenue, New York, N.Y. 10016

The Doctor's Agency

Endorsed by the Maine Medical Association

NOYES & CHAPMAN

General Insurance

465 Congress Street

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SPECIALIST IN MALPRACTICE INSURANCE

Serving Maine doctors in all forms of insurance for over 90 years

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EDWARD D. NOYES III

Abbott Antihypertensive Building Blocks

A simplified approach to the practical management of hypertension



Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persists for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON

METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

When you wish to build further response, consider shifting to Enduronyl.

Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

Once a day, every day

ENDURONYL®

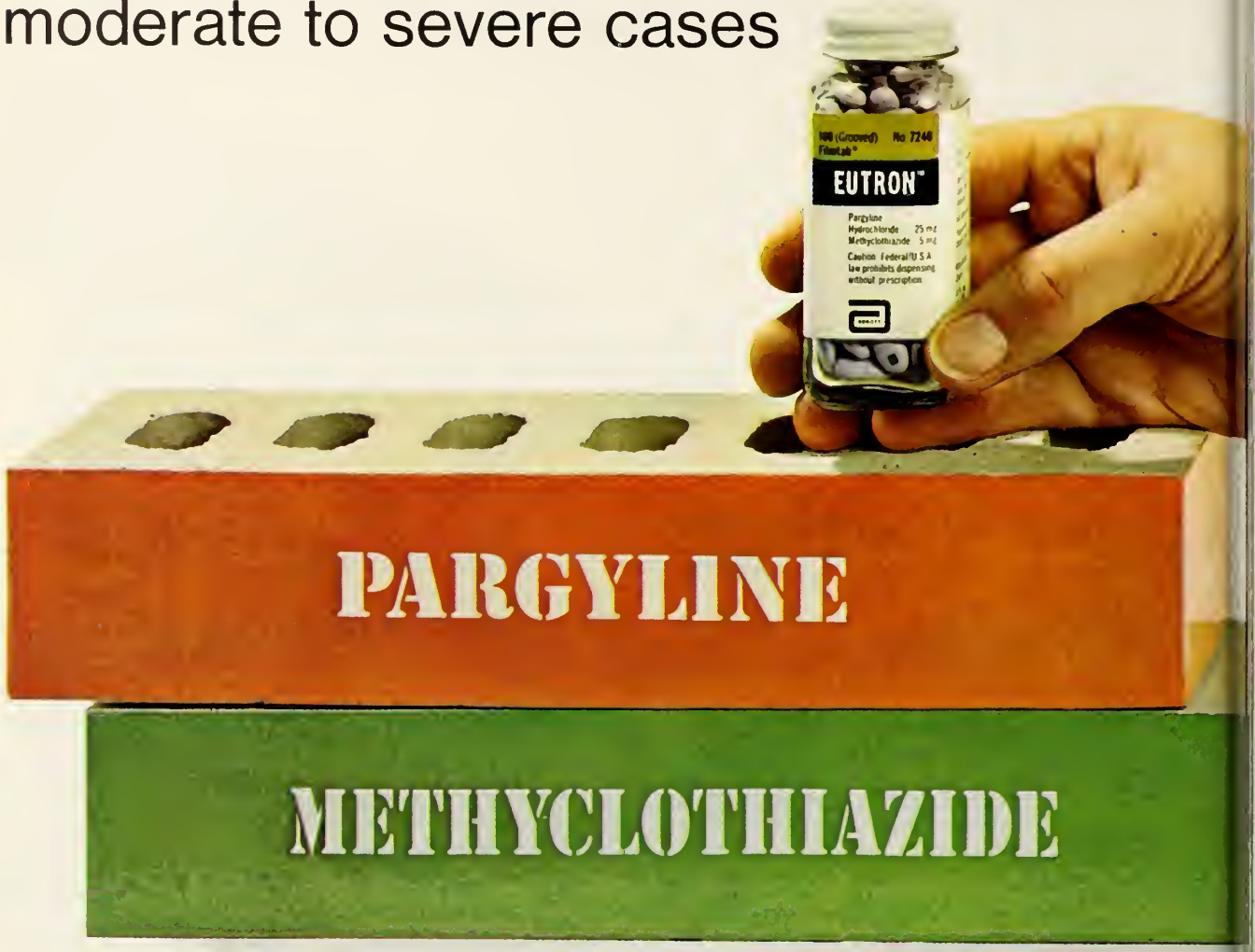
METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

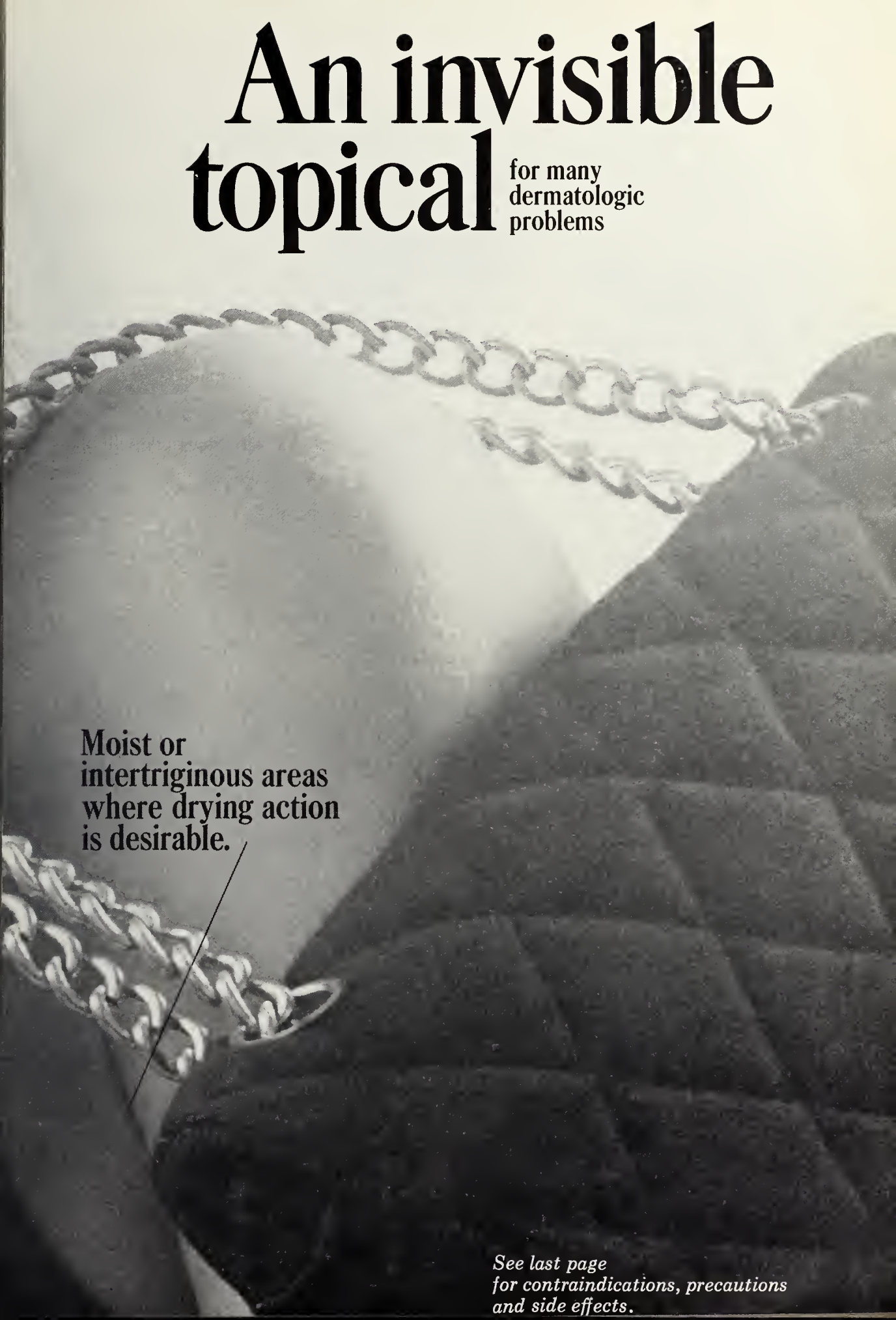
ABBOTT

TM-TRADEMARK


Hairy sites where creams and ointments do not spread or penetrate readily.
Exposed areas where cosmetic considerations are important.

An invisible topical

for many dermatologic problems



See last page for contraindications, precautions and side effects.

Structurally unique topical steroid in propylene glycol vehicle produces rapid response in many dermatoses.

Synalar Solution produces rapid antiinflammatory, antipruritic action through its unique topical corticosteroid, fluocinolone acetonide. The propylene glycol vehicle provides additional benefits for therapy at problem sites where it is difficult to achieve contact between the lesion and medication—or where creams or ointments may make the lesions worse. Synalar Solution has proved particularly valuable in the symptomatic treatment of seborrheic dermatitis of the scalp, nasolabial folds, eyebrows, ears, and in flexural folds such as the axillae, inframammary, umbilical and anocrural areas. It has also been reported to achieve excellent results in the adjunctive management of atopic dermatitis, contact dermatitis, neurodermatitis, nummular eczema, psoriasis, and sweat retention syndromes in these problem sites.

Penetrates the hairy sites.

In many areas of the body, hair gets in the way of treating the underlying dermatitis. The propylene glycol vehicle of Synalar Solution permits penetration and dispersion at sites where creams and ointments do not readily penetrate. May be applied without matting of hair.

Ideal for moist or intertriginous areas.

Propylene glycol is strongly hygroscopic and is especially useful where sweat retention is a problem. Its low surface tension permits easy spreadability in difficult-to-treat body areas. A number of studies have also shown that propylene glycol has inherent antimicrobial activity.



m:tically
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e)posed areas.

ro ylene glycol vehicle
ha r Solution possesses
u:ful cosmetic properties.
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l ng way. Also, the
r ion price of a 20 cc.
c queeze bottle of
a Solution is surprisingly
h s, your patients obtain
r with the proved
y of a potent, truly
c l topical corticosteroid.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components.

Precautions: In some patients with dry lesions, the solution may increase dryness, scaling, or itching. Application to denuded or fissured areas, such as genital or perianal sites, may produce a burning or stinging sensation. If this persists and dermatitis does not improve, discontinue medication. Although propylene glycol has antiseptic activity, there should be careful initial evaluation and follow-up of infected sites. Incomplete response or exacerbation of lesions may be due to true infection, which requires susceptibility testing and appropriate therapy. On the other hand, saprophytic or low grade infections may clear spontaneously under the influence of Synalar Solution alone. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

Side Effects: Side effects are not encountered ordinarily with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

Availability: Synalar (fluocinolone acetonide) Solution 0.01% in a propylene glycol vehicle with citric acid as preservative. 20 and 60 cc. plastic squeeze bottles. *Also available:* Synalar (fluocinolone acetonide) Cream 0.025%—5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01%—15, 45 and 60 Gm. tubes and 120 Gm. jars. Ointment 0.025%—15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream—5, 15 and 60 Gm. tubes.

fluocinolone acetonide—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

Synalar®
(fluocinolone acetonide)
Solution
0.01%

An invisible topical

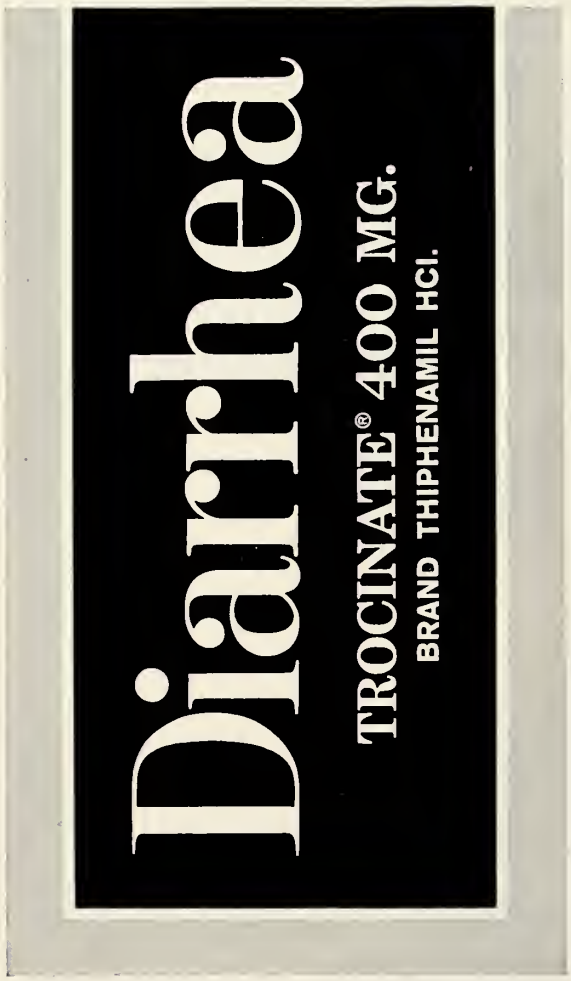




The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856



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mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide . . . . . 195 mg.
Aminophylline . . . . . 130 mg.
Phenobarbital, Caution: May be habit forming . . . 21 mg.
Ephedrine HCl . . . . . 16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

To fight TB- find it first!

Make tuberculin testing routine with every physical examination.



TUBERCULIN, TINE TEST (Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

Lederle

330–8/6135

IF ADVERTISED

IN THE JOURNAL

IT IS GOOD

TELEPHONE
774-8276 FOR

Insurance for Members

OFFICIALLY ENDORSED by the

MAINE MEDICAL ASSOCIATION

DOW & PINKHAM

107 EXCHANGE STREET, PORTLAND

D&P
AN ANCHOR TO WINDWARD

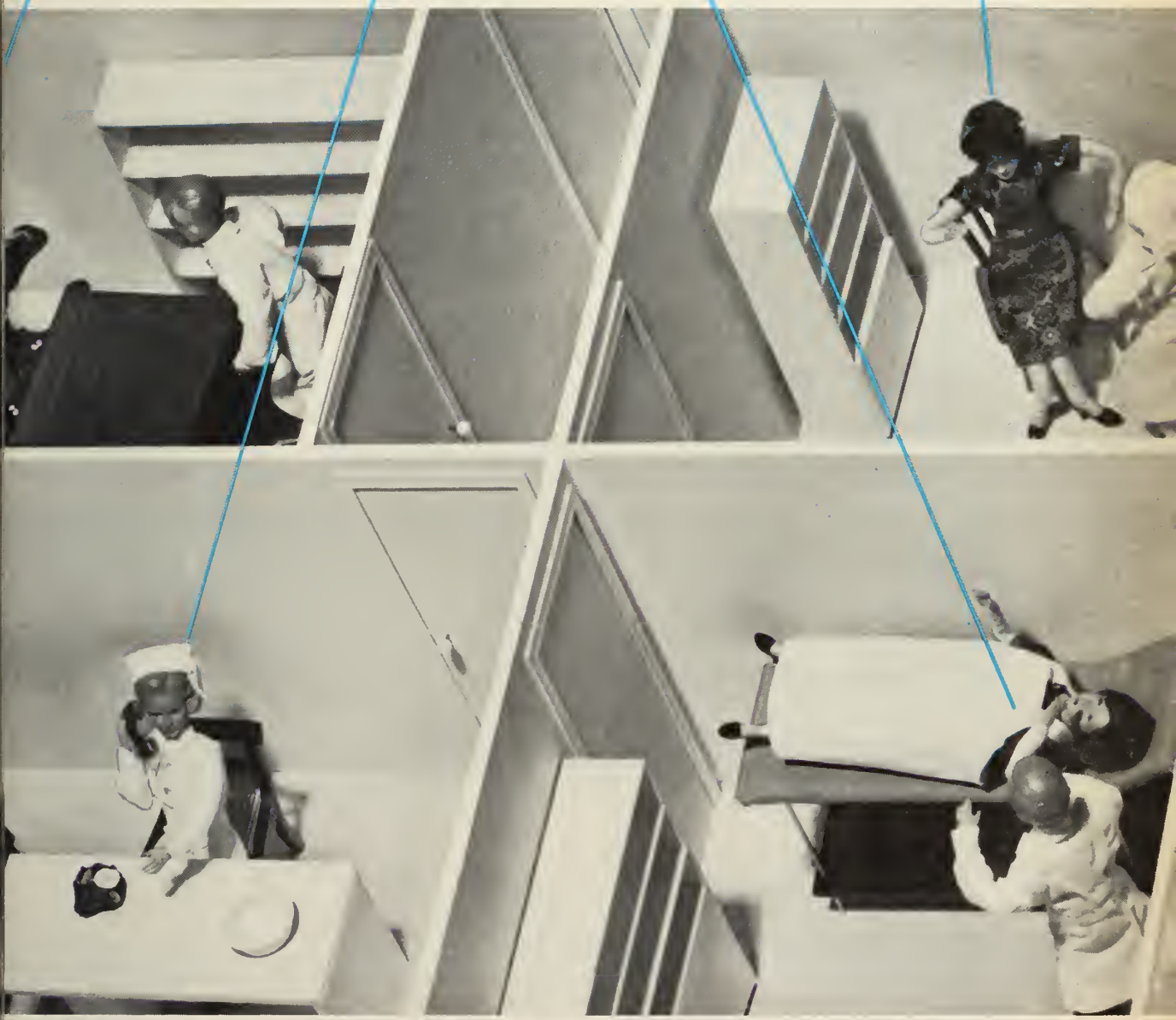
When the emotionally impaired patient pays an office call...

e asks for your help, just can't seem ollow through your advice.

When not at your office, she's constantly on the phone: can't sleep, headache, G.I. upset.

She often seeks a physical explanation for her distressing emotional state.

She's excessively apprehensive; demands much more of your nurse's attention.



oderate to severe anxiety...

ellaril helps control the most frequent symptoms: marked ion, agitation, apprehension, restlessness, hypermotility ellaril often alleviates anxiety-induced somatic complaints ellaril frequently helps strengthen emotional resources ellaril helps the patient maintain istic contact with environment, closer mony with family

traindications: Severely depressed or atose states from any cause, and in ociation with or following MAO inhibi-; severe hypertensive or hypotensive t disease.

:autions: Hypersensitivity reactions ., leukopenia, agranulocytosis) and vulsive seizures are infrequent. Pig-ntary retinopathy has been observed re doses in excess of those recom-nded were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

for moderate to severe anxiety

Mellaril®

(thioridazine)

25 mg. t.i.d.

SANDOZ

Before prescribing, see package insert for full product information.

68-115

Night Leg Cramps . . . Unwelcome Bedfellow

In Diabetes[1], Arthritis[2], and Peripheral Vascular Disorders[2]



now . . . specific therapy for night leg cramps

Walker

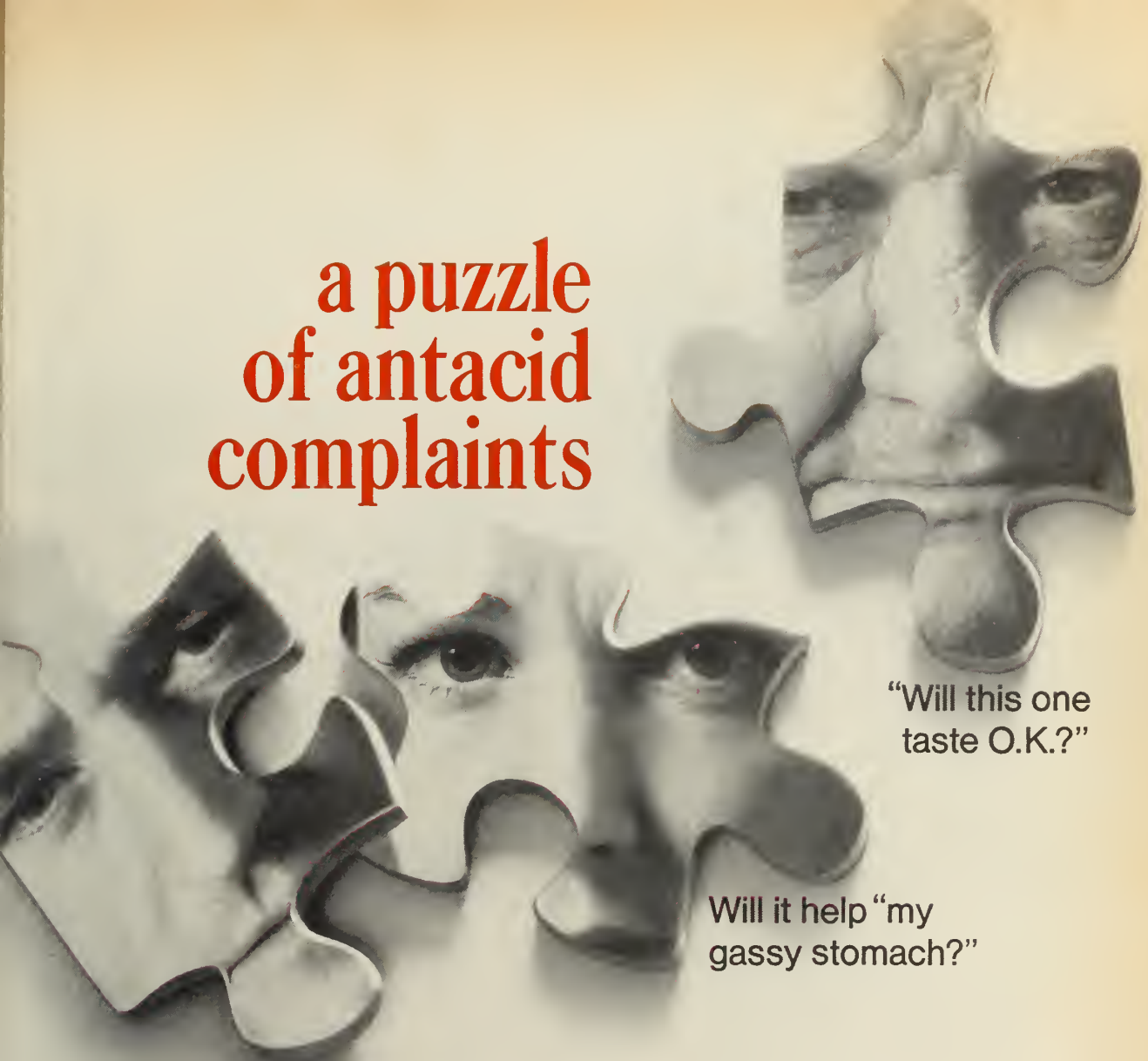
QUINAMM™

Consistently effective, QUINAMM provided complete relief in 94% of 200 potients studied, mony of whom were severe coses refroctory to other medication.[3] Your prescription for one toblet at bedtime often controls painful night cramps with the initiol dose . . . helps restore restful sleep.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Prescribing Information: Composition: Each white, beveled, compressed tablet contains: Quinine Sulfate 260 mg. and Aminophylline 195 mg. **Contraindication:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one toblet upon retiring. **Supplied:** 8ottles of 100 and 500 tablets.
References: 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et ol.: Angiology, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959.
6/67 Q-706A

a puzzle of antacid complaints



"Will this one taste O.K.?"

Will it help "my gassy stomach?"

"Will it stop the pain?"

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References. 1. Hoon, J. R.: Arch. Surg. *93*:467 (Sept.) 1966.
2. Danhof, I. E., Personal communication.

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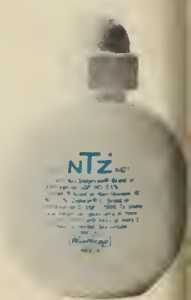
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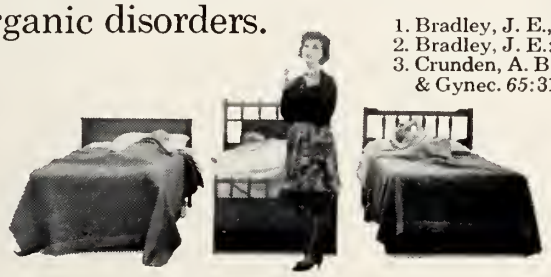
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1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst, & Gynec. *65*:311 (Feb.) 1953.



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Psychic tension with depressive symptomatology?

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When the patient complains of fatigue, and you can find no organic cause, you recognize that it may serve her as a means of avoiding responsibilities or facing an emotional problem. It is, in effect, a psychological retreat behind a somatic cover of continuous fatigue —one of the many depressive symptoms often associated with psychic tension.

She needs counsel and reassurance, and perhaps a tranquilizer to attenuate excessive tension and help restore the capacity to cope. As an aid to successful management, consider the value of Valium® (diazepam). As psychic tension is eased by Valium therapy, secondary depressive symptoms too may subside. The patient feels more capable, therefore more hopeful; better able to handle situations of intense stress.

Before prescribing Valium (diazepam), consult complete product information; a summary follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium, such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See **Precautions.**) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Mercy Hospital Number

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Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg every 6 hours for a minimum of 4 doses or 300 mg every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg every 6 hours or 300 mg every 12 hours until a cure is effected.

Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg in 3 divided doses for six days.

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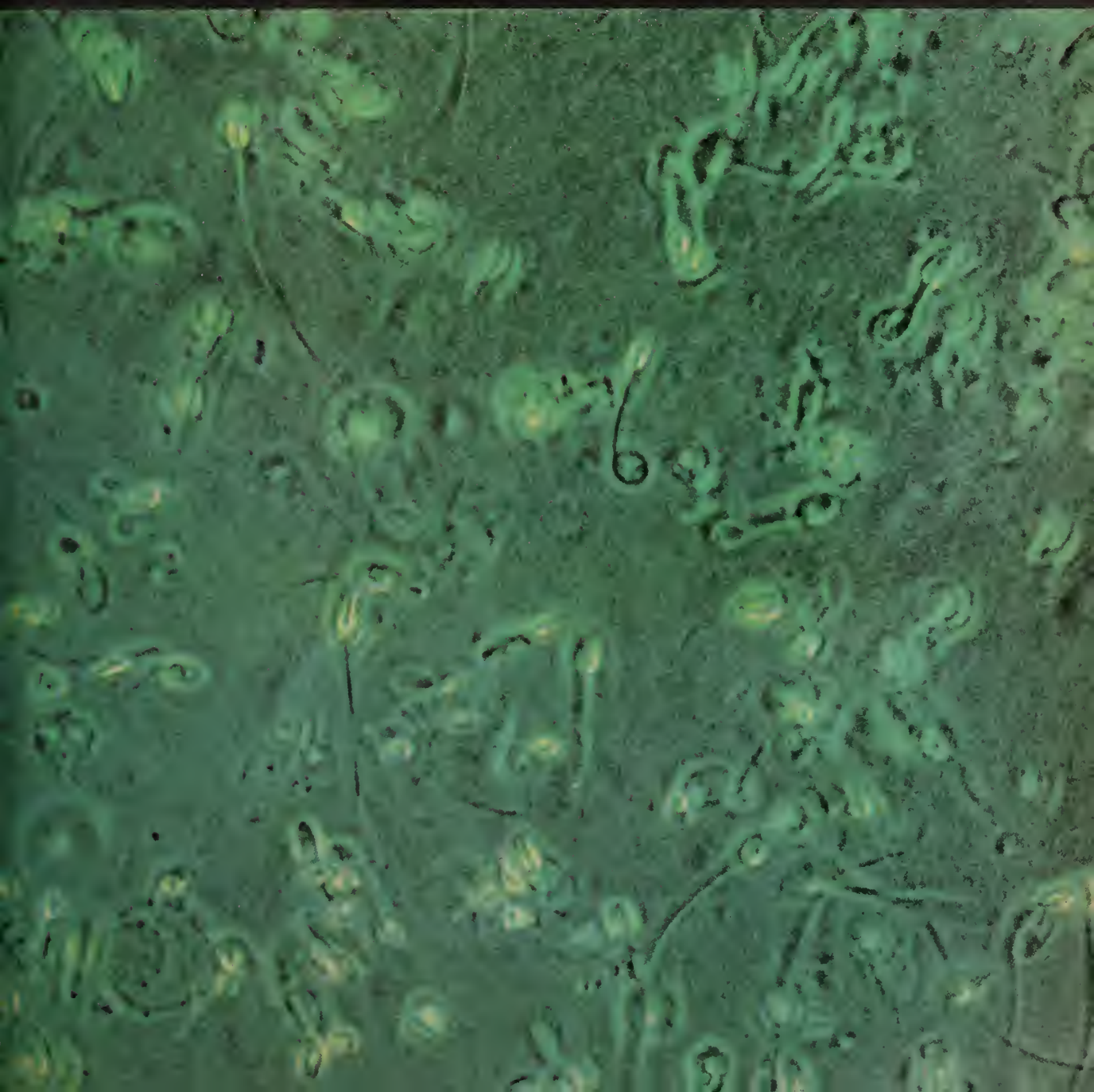
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When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg. ē mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of NORINYL-1 (norethindrone 1 mg. with mestranol 0.05 mg.) in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with NORINYL-1. Therefore, if such tests are abnormal in a patient taking NORINYL-1 it is recommended that they be repeated after the drug has been withdrawn for two months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibromyomata may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. 5. NORINYL-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, and as in all cases of irregular bleeding *per vaginam*, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged NORINYL-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving NORINYL-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. 11. Because of the effects of estrogens on epiphyseal closure, NORINYL-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with NORINYL-1 may mask the onset of the climacteric. 13. The pathologist should be advised of NORINYL-1 therapy when relevant specimens are submitted.

Side effects observed in patients receiving oral contraceptives: The following adverse reactions have been observed in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weig (increase or decrease), changes in cervical erosion and cervical secretio suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression.

Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation post-treatment, premenstrual-like syndrome, change in libido, changes in appetite, cystiti like syndrome, headache, nervousne dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nod sum, hemorrhagic eruption, itching

The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has been neither established nor dis proved): thrombophlebitis, pulmona embolism, neuro-ocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, Factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

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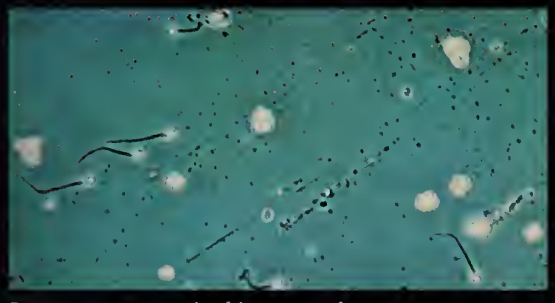
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.



Spermatozoa appear healthy, active, freemoving.

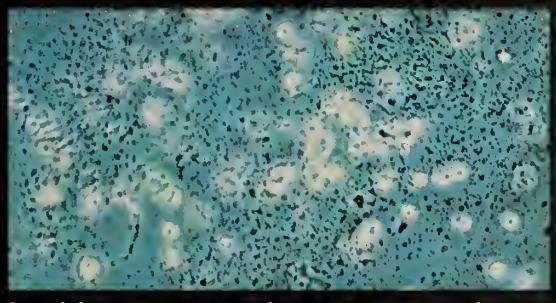


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

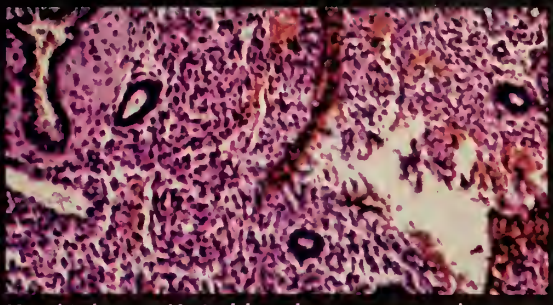
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

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(norethindrone 1mg. ē mestranol 0.05mg) tablets

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost



Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant patients, since the drug may cross the placental barrier and adverse reactions which may occur in the adult (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Hygroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Hygroton should be discontinued and potassium supplements given, provided the



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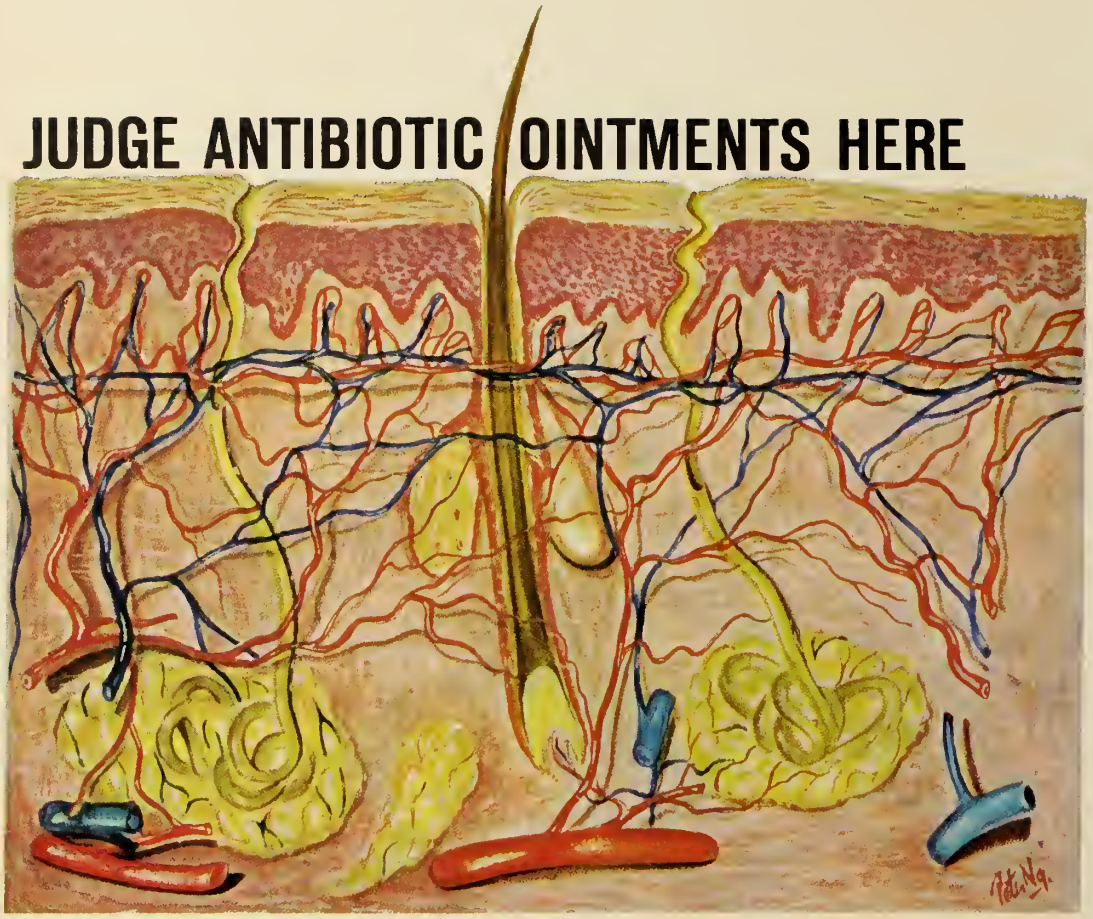
Hygroton therapy may mean troublesome side effects for some patients. And you can't prescribe it for patients with hypersensitivity to the drug or severe renal or hepatic diseases. Before writing it for your patients, please check the prescribing information. It's summarized below.

ient does not have marked oli-
ia.
e special care in cirrhosis or
ere ischemic heart disease and
atients receiving corticoste-
ds, ACTH, or digitalis. Salt re-
ction is not recommended.
verse Reactions: Nausea, gastric
ation, vomiting, anorexia, con-
ation and cramping, dizziness,
akness, restlessness, hyperglyc-
nia, hyperuricemia, headache,
scle cramps, orthostatic hypo-
tension, aplastic anemia, leuko-
penia, thrombocytopenia, agranu-
locytosis, impotence, dysuria,
transient myopia, skin rashes, urti-
caria, purpura, necrotizing angiitis,
acute gout, and pancreatitis when
epigastric pain or unexplained G.I.
symptoms develop after prolonged
administration. Other reactions re-
ported with this class of compounds
include: jaundice, xanthopsia,
paresthesia, and photosensitization.
Average Dosage: 50 or 100 mg. with
breakfast daily or 100 mg. every
other day.
Availability: White, single-scored
tablets of 100 mg. and aqua tablets
of 50 mg., in bottles of 100 and 1000.
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**For full details, please see the com-
plete prescribing information.**

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Division of
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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

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When it's time for Thorazine® brand of chlorpromazine



...can you depend on less?

For profound calming effect in moderate to severe mental and emotional disturbances of everyday practice.

Before prescribing, see complete information, including adverse effects reported with phenothiazines and symptoms and treatment of overdosage, in SK&F literature or *PDR*. The following is a brief precautionary statement.

Contraindications: Comatose states or the presence of large amounts of C.N.S. depressants.

Precautions: Potentiation of C.N.S. depressants may occur (reduce dosage of such agents when used concomitantly). Use with caution in patients with chronic respiratory disorders. Antiemetic effect may mask overdosage of toxic drugs or obscure other conditions. Administer in pregnancy only when necessary. Because of possible drowsiness use cautiously and warn patients who operate vehicles or machinery.

Adverse Reactions: Drowsiness; dry mouth; nasal congestion; constipation; amenorrhea; miosis; mild fever; weight gain; hypotensive effects, sometimes severe with I.M. administration; epinephrine effects may be reversed; dermatological reactions; parkinsonism-like symptoms on high dosages (in rare instances, may persist); lactation and moderate breast engorgement (in females on high dosages); and less frequently, cholestatic jaundice (use cautiously in patients with liver disease). Adverse reactions occurring rarely, include: mydriasis; agranulocytosis; skin pigmentation; epithelial keratopathy; lenticular and corneal deposits (after prolonged substantial doses).

Available: Tablets, 10 mg., 25 mg., 50 mg., 100 mg. and 200 mg.; Spansule® capsules, 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg.; Injection, 25 mg./cc.; Syrup, 10 mg./5 cc.; Suppositories, 25 mg. and 100 mg.

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Weariness without cause"



Psychic tension with depressive symptomatology?

"For weeks I've done practically nothing and I'm always tired. I wake up tired and I go to bed tired. It's really absurd."

When the patient complains of fatigue, and you can find no organic cause, you recognize that it may serve her as a means of avoiding responsibilities or facing an emotional problem. It is, in effect, a psychological retreat behind a somatic cover of continuous fatigue —one of the many depressive symptoms often associated with psychic tension.

She needs counsel and reassurance, and perhaps a tranquilizer to attenuate excessive tension and help restore the capacity to cope. As an aid to successful management, consider the value of Valium® (diazepam). As psychic tension is eased by Valium therapy, secondary depressive symptoms too may subside. The patient feels more capable, therefore more hopeful; better able to handle situations of intense stress.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects —particularly with known compounds which may potentiate action of Valium, such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See **Precautions.**) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg, and 10 mg; bottles of 50, 100 and 500.

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Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persists for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON®

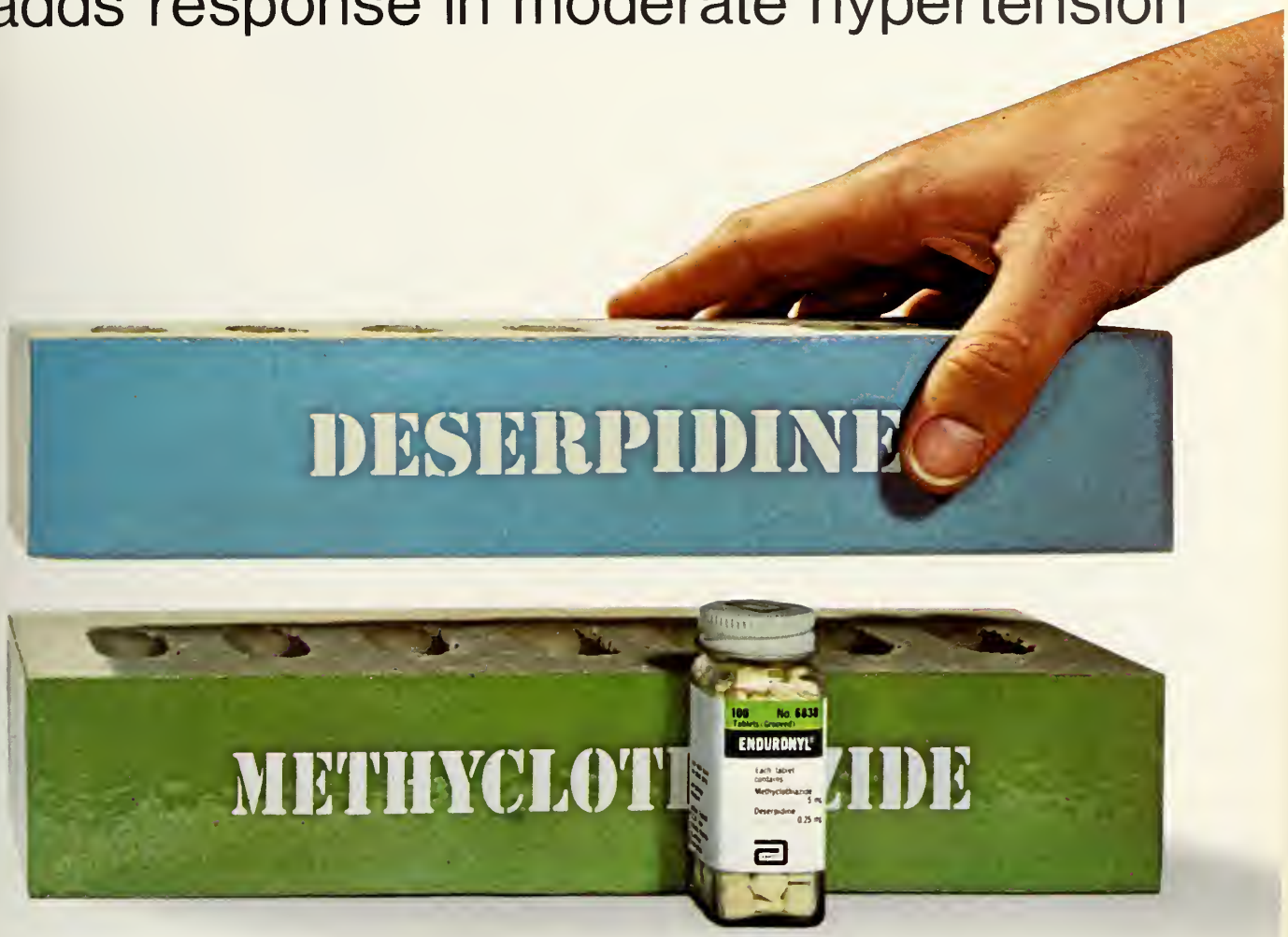
METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

When you wish to build further response, consider shifting to Enduronyl.

Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

Once a day, every day

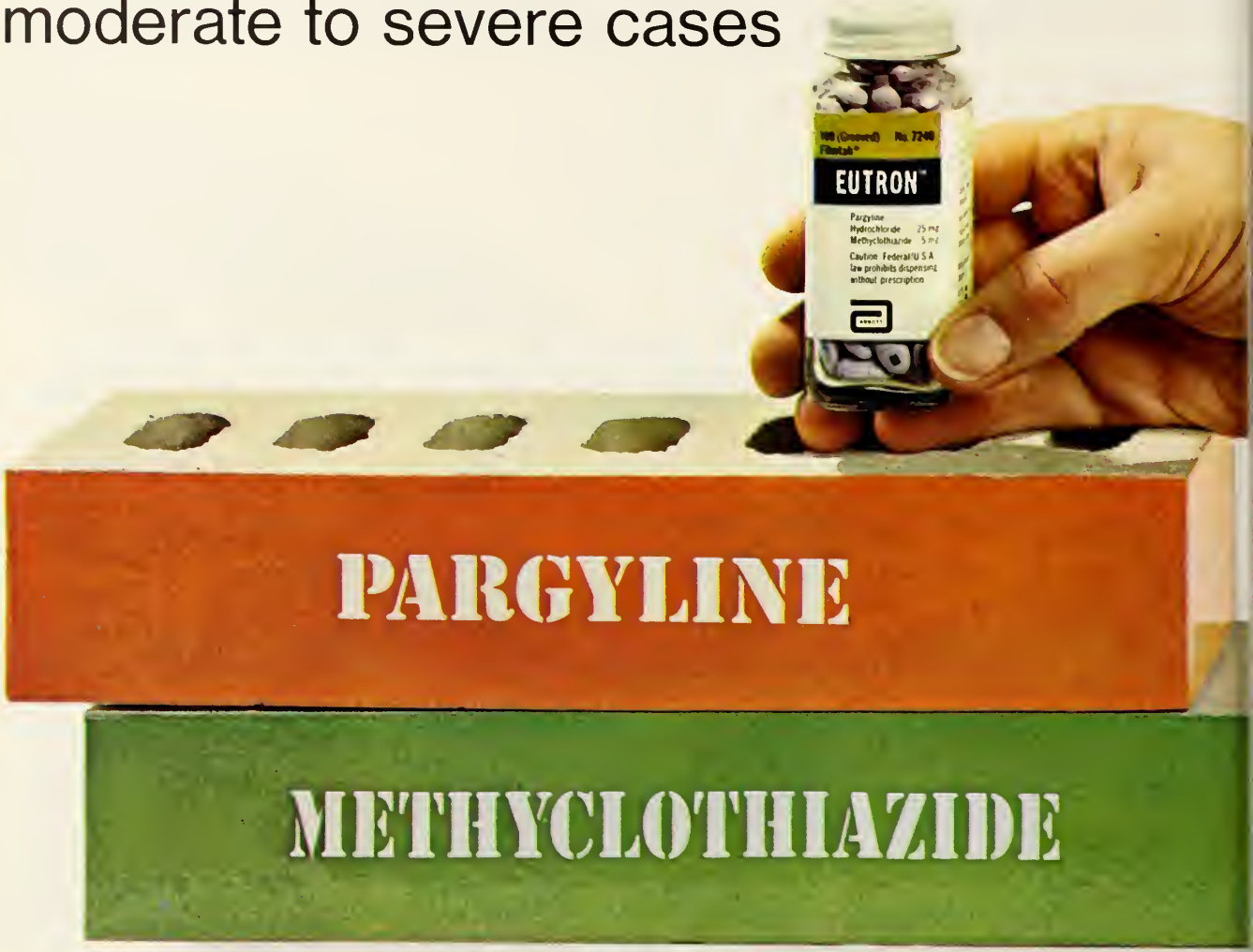
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METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.



See Brief Summary on final page of advertisement

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage; caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

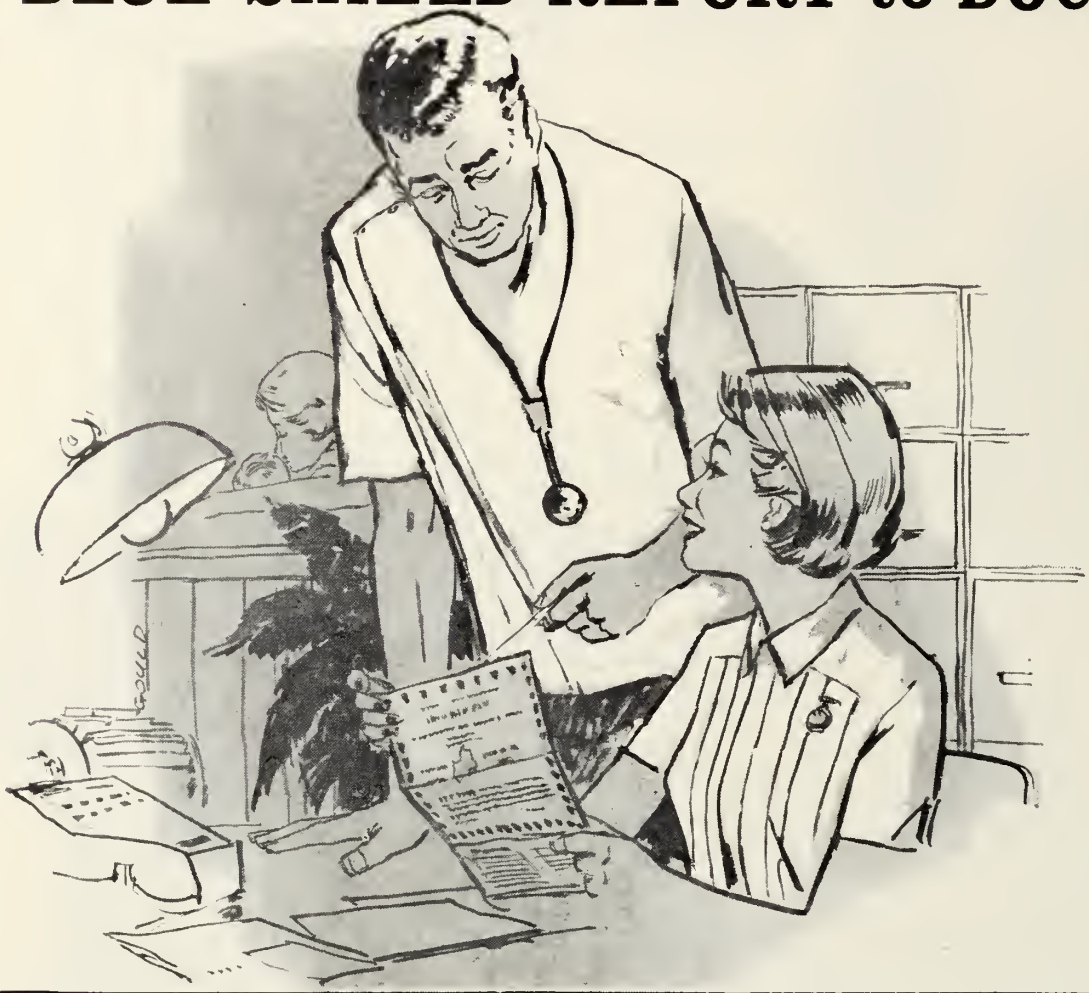
Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

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REPORT # 13

Claims Involving Suturing

Reporting location and length of wounds — Allowances for suturing are determined primarily by these factors — Report location, size and type of closure. Also whether benign or malignant lesions are involved.

Information such as this should be recorded in the section provided for such reference located at the bottom of the claim form.

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Participating MDs

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PORTLAND, MAINE 04101



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Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

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Make tuberculin testing routine with every physical examination.



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Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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The Journal
of the
Maine Medical Association

Volume Fifty-Nine | Brunswick, Maine, May, 1968 | Number 5

Medical Ecumenism in Portland

William L. MacVane, Jr., M.D.*

"About all the medical systems now recognized, except the Thompsonian or screw-auger system, with its lobelia for every ailment, like the blue-pills of Abernethy, and the yellow mustard seed of the school that appeared and disappeared – about 1823 – are represented here.

"We have the Allopathic, the Homeopathic, the Eclectic, the Hydropathic and the vegetarian, all under way, and the two first-mentioned occupying a boundless field, very jealous of each other, very uncharitable, but always in full blast.

"So far is the antipathy carried, that the Homeopathics, who count among their brethren some of the ablest, best educated and clearest headed men among us, many of the foremost having been Allopaths of large practice, until their convictions and experiences obliged them to go through a second course of experiments is homeopathy – so far is the antipathy carried that they are excluded from the Cumberland Medical Association, the members of which are forbidden to associate with them in practice, to hold consultations with them; and they are not even allowed to intermeddle with the management of the Maine General Hospital, nor to have so much as a ward assigned them though many homeopathists are among the liberal contributors to this enterprize.

"And this, while the Allopaths, following the Homeopathics, have about given up their bleeding, purging, blistering and emetics, and dimished their principal medicines about infinitesimally.

"Nevertheless – and notwithstanding this much to be lamented jealousy, we have reason to be proud of our medical men as a body; our surgeons are distinguished, our physicians of acknowledged skill and worth, and even our surgeon-dentists, as they have begun to be called, are distinguished, and deservedly so, for we have some of the best now living."

Such was the state of Medicine in Portland as reported by John Neal, Portland author and poet in *Portland Illustrated* published in 1874. A similar professional climate has existed in Portland between the M.D.'s and the D.O.'s ever since the passage of the Osteopathic practice act by the Legislature in the 1920's and continuing almost up to the present time. As Doctor Jean A. Curran stated in *Medical Care in the State of Maine 1956 – 1962,* "The Presence of Osteopathic Hospitals in Maine cities and a large number of their physicians in both rural and urban areas was observed as a striking phenomenon. The two professions were carrying on their activities quite independently by mutual consent. It was conceded that without the presence of the osteopathic practitioners, the doctors of medicine would not be able to meet the case load requirements of the State."

Recently some changes have occurred which are somewhat similar to the Ecumenical movement among Christian churches. Basically, these changes came about because of more realistic and less restrictive attitudes on the part of the AMA and the AOA, but on the local scene the steps have been as follows:

1. The House of Delegates of the Maine Medical Association passed a resolution which allowed for limited association for various educational purposes and for the good of the patient in June of 1966.
2. In November 1966 the Cumberland County Osteopathic Society invited the members of the Cumberland County Medical Society to a symposium on chest diseases held at the Osteopathic Hospital of Maine. Several members of the Cumberland County Medical Society attended these meetings.
3. In December 1966, The Maine Academy of General Practice held a meeting at the Eastland Hotel to which individual members invited Osteopaths as their individual guests.
4. Following this, plans were made for a Lederle Symposium to be held in Portland on October 20, 1967, under the auspices of the Cumberland County Medi-

*Director of Medical Education, Mercy Hospital, Portland, Maine 04101.

cal Society and the Maine Academy of General Practice and it was decided to invite the members of the Cumberland County Osteopathic Society to attend this. Somewhat over twenty Osteopathic Physicians attended both the scientific and social parts of the program and an excellent time was had by all.

5. During August, September and October of 1967 Melvin J. Krant, M.D. was in Portland doing a survey of Postgraduate Medical Education at both the Mercy Hospital and the Osteopathic Hospital of Maine for the Postgraduate Medical Institute under a grant from the Public Health Service. Through his good offices as a catalyst, Doctor Edward T. Newell, Director of Medical Education at the Osteopathic Hospital of Maine and I were able to plan and set up a course in Electrocardiography for the combined Staffs of the two hospitals. The course in Clinical Electrocardiography was given by David H. Spodick, M.D., Chief of the Cardiology Division at the Lemuel Shattuck Hospital in Boston. It began on October 25, 1967 and consisted of five two-hour lectures on succeeding Wednesdays. Because both Doctor Newell and I were members of the Board of Corporators of Regional Medical Care, it seemed to us that this course might be eligible for funding by the Maine Regional Medical Program and after jointly exploring this possibility with Doctor Manu Chatterjee, the Director of the Regional Medical Program, the course was so funded as a pilot project. The course was extremely well run and enthusiastically received by the participants. To our knowledge it was the first such educational endeavor planned jointly by and for both the Osteopathic and Medical physicians.

6. Because of some question of lack of communication concerning educational functions in the community, a round table monthly meeting of the Directors of Medical Education at the Maine Medical Center, Osteopathic Hospital of Maine and Mercy Hospital, has been instituted at the suggestion of Doctor Manu Chatterjee and Mr. George Nilson of the Regional Medical Program. This group has already had two rather fruitful meetings.

Because of the new ecumenical spirit and the continuing dialogue as portrayed above, I feel that the relationship between the Doctors of Medicine and the Osteopathic practitioners in Maine will improve, with marked benefit to the people of Maine.

211 State Street, Portland, Maine 04101

See Pages 103 through 109
for the 1968 Maine Medical Association
Annual Session Program

Liver Scan in Everyday Medicine

Tibor Doby, M.D.*

Billions and billions of polygonal liver cells and Kupffer cells add up to a homogeneous grey mass in x-ray films and the refined laboratory tests are but the sum of their function or malfunction. Anything more localized in nature up until the last decade could be answered only by investigating the biliary or the vascular system. Their secondary displacement, the widening or narrowing of the ducts and vessels rendered some information, but limitations were numerous diagnostically as well as technically. In an era of sophisticated medical knowledge, when we pinpointed minute lesions in the central nervous system, in the gastrointestinal tract, and in the conductive system of the heart, the liver remained a huge area of no man's land.

In the last ten years some radioactive isotopes were found to collect in the polygonal cells, or Kupffer cells and they finally rendered practical methods to visualize the mass of these cells – or their absence. If visualization is not simply through our eyes, but with the aid of complicated intermediary electrical signals, nevertheless the result is seeing the spatial relationship of liver versus "non-liver" matter, unless the dimensions get too small to record (less than 2 cms in diameter). The make up of the "non-liver" matter can be of tremendous variety, blood (hematoma), serous liquid (cyst), pus (abscess), scar, tumorous involvement. From this point of view it is important to evaluate diseases of the liver in regard to normal specific liver tissue is related to "non-liver" substances spatially.

Diseases Affecting the Liver

1. Diffuse liver diseases.
   a). Hepatitis due to chemical or toxic agents.
   b.) Hepatitis due to infectious agents.
   c.) Metabolic disturbances (fatty infiltration, amyloidosis, etc.).
   d.) Circulatory disturbances (shock, congestion, portal vein path.).
2. Widespread spotty involvement.
   a.) Toxic or infectious agents (cirrhosis, schistosomiasis, etc.).
   b.) Metabolic disturbances (Wilson's disease, hemochromatosis, etc.).
   c.) Circulatory disturbances (cardiac cirrhosis).
3. Focal involvement.
   a.) Toxic or infectious granulomas (tb., sarcoidosis, beryllium poisoning, fungal or parasitic infections, etc.).
   b.) Abscesses of different origin.
   c.) Different types of tumors (benign, primary or secondary carcinoma, sarcoma, lymphoma, etc.).
   d.) Circulatory causes (traumatic hemorrhage, scarring, Budd-Chiari syndrome, infarction, etc.).
4. Diseases of the biliary tract.
   a.) Stones of the gallbladder or biliary ductal system.
   b.) Cholangitis (suppurative, stenosing).
   c.) Congenital anomalies (atresia, dilatation of ducts, etc.).
   d.) Carcinoma (gallbladder, biliary ducts).

In the first category of diseases the damage of liver cells is usually uniform (in the gross sense at least) and not accessible for isotope scanning evaluation, although occasionally they cause spotty uptake of the isotopes. Diseases of the biliary tract or circulatory disturbances generally are better evaluated by other methods (Graham-Cole test, I.V. cholangiogram, preop. percutaneous cholangiography, hepatic arteriography, splenoportography, GI series). The diseases listed in the second and especially those in the third category are the ones best suited to radioactive scanning study.

In the early 1930's when they started to use Thorium for angiography they soon found out that it was collected in the reticuloendothelial system because of it's colloidal nature and therefore naturally in the liver as well. The main interest however was angiography and nobody paid too much attention to the possibilities this side-effect presented in regards of the liver. Later it was found that Thorium with its potent alpha radiation and gamma ray emission had some very undesirable side effects on the liver. A further disadvantage was the long persistence of the radiation (the half-life of Thorium being 1.9 years) which eventually caused scarring or even hepatomas. For two decades the diagnostic approach with isotopes remained dormant. Lately in the course of extensive investigations with radioactive elements many radioactive isotopes were tried, and finally two were shown to have real practical value: Rose Bengal and Gold colloid. Both of these give good scanning images and in addition further information about the function of the liver is available when they are used.

Rose Bengal is a beautiful purple dye which physiologically behaves like BSP. Only 3-4% is taken up by the extravascular space, the rest stays in the circulation from which 5% is excreted with the urine, but more than 90% is excreted through the polygonal cells of the liver into the bile. If we tag Rose Bengal with radioactive Iodine (I 131, half-life 8.08 days) we have a convenient way to follow it's accumulation and excretion

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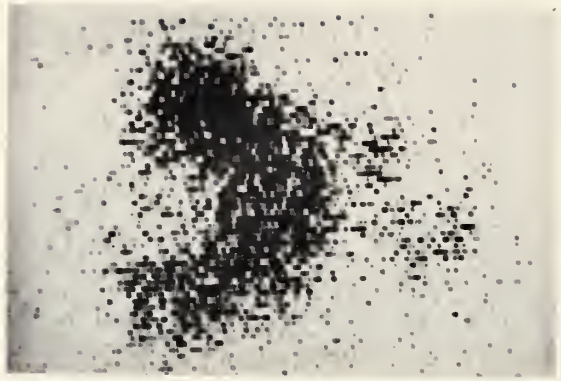


Fig. 1, Case No. 1, A 72-year old female. Progressive jaundice without pain. Icteric index 27 units. Cholecystogram very faint visualization of the gallbladder. The liver was not palpable. Rose Bengal I131 scan showed a large defect in the right lobe of the liver and partial replacement of the left lobe by suspected metastases. At that point the primary lesion was unknown. Surgery confirmed the scanning diagnosis. The primary tumor was carcinoma of the cecum.

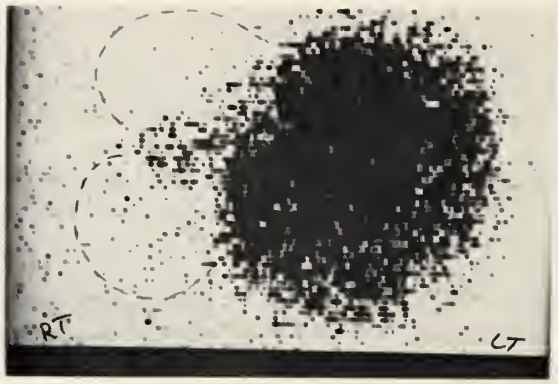


Fig. 2, Case No. 2, A 69-year old female. Failing appetite, pressure in the stomach, nausea, weakness were the chief complaints. Slight jaundice was noted at admission. The liver was palpable 4 fingerbreadths below the costal margin. X-ray films revealed two round big calcifications in the liver. Rose Bengal I131 scan showed almost total replacement of the right lobe by two large cysts presumed to represent echinococcal; cysts. Because of progressive jaundice laparotomy was performed and besides gallstones carcinoma of the common duct was found and additionally two large echinococcal cysts. A few metastases in the liver were not revealed by the scan due to their small size.

through the liver. If we inject very small amounts (10-25 microcuries) we can perform valuable functional tests, of which only the simplest and most rewarding two are mentioned here.

1. Clearance of Rose Bengal Iodine from the blood. Radiation counts are recorded over the head far from the liver, where the counts represent the isotope contents of the systemic circulation. The first reading is recorded 5 minutes after rapid injection and this highest figure is regarded as 100%. Counts are then repeated every 5 minutes. In normal cases the count decreases to 50% in 20 minutes. If hepatocellular damage is present, the count will remain about 90% indicating that the liver is unable to clear Rose Bengal from the circulation.

2. Liver vascular capacity is measured in 30-90 seconds count over the liver before excretion starts to take place. In normal individuals about 15% of the injected radioactive material shows up in the blood contained in the liver. After 24 hours in cases of hepatocellular damage the counts still approach the first count level, the liver cells being unable to excrete. In biliary obstruction, the counts will be higher (sometimes 2-3 times the initial count) because most of the Rose Bengal will be trapped in the bile by that time.

For scanning we inject 200 microcuries. This delivers a total radiation dose of approximately 0.5 Rads to the liver, or less than a single abdominal x-ray film exposure. In cases of obstruction the dose is a little more, but still far from being harmful. The scanning images are clear cut.

Au 198 colloid (half-life 2.7 days) is commercially available in the form of 5-50 millimicron particles, which after the injection into the circulation are taken up by the reticuloendothelial cells, mainly by the Kupffer cells of the liver. Gold Colloid stays there and loses its radioactivity in due time, delivering a dose of 5 Rads, the same amount of radiation as experienced in a routine IVP study. The injected amount of Gold Colloid is in the vicinity of 150 microcuries, but for functional studies 5-15 microcuries are sufficient. The easiest of them to perform is the Au 198 clearance study from the blood. After rapid injection counts are registered over the head every minute. Approximately 25% of the radioactive particles are cleared from the circulating blood of normal individuals each minute. The clearance rate in cirrhosis or jaundice is slower (10% per minute). If there is loss of Kupffer cells (cirrhosis) the spleen can collect up to 50% of the injected material, the bone marrow up to 25% and this is borne out by checking counts or scanning over the spleen and sacrum. The uptake in the liver in these cases is not uniform, resulting in a mottled appearance. Uptake to the spleen is genuinely increased in myeloproliferative diseases, lymphoma, and malaria.

In recent years Au 198 is taking the place of Rose Bengal I. It has some definite advantages. There is no interference with the excreted bile flowing into the intestines as with Rose Bengal I. As the gold colloid stays in the liver, reexamination can take place several days after the original injection without further reinjection and this can be occasionally valuable especially in surgical cases (abscess, cyst, etc.). Appearance of a definite spleen scan on the side of the liver scan can give additional hints to the diagnosis. It must be stated that both scanning media give good scan images.

As pointed out previously any "non-liver" substance will fail to take up the isotope and the blank areas will indicate absence of either polygonal or Kupffer cells.



Fig. 3, Case No. 3, A 67-year old man, who underwent abdominoperineal resection for carcinoma of the rectum. In the past few months he started to experience increasing abdominal pains. The liver was large, firm and nodular to palpation. Rose Bengal I131 scan showed two large sized skipped areas which were interpreted as metastatic tumor masses. The slightly blurred appearance of the scan is result of viewing through sanded plastic. This method eliminates the sometimes distracting pattern of the photo dots and gives a more homogeneous image of the pathology.



Fig. 4a



Fig. 4b

Fig. 4a, b, Case No. 4, A 67-year old man. He had his sigmoid removed for adenocarcinoma. After two years of well-being he started to be nauseated, vomited occasionally, lost weight. On physical examination the liver was felt descended 3 fingerbreadths below the costal margin and it was rather tender on palpation. Gold 198 colloid scan shows (through sanded plastic) a very large skipped area interpreted as metastatic carcinoma. It occupies most of the right lobe especially posteriorly, visualized best on the lateral scan. The lower edge of the liver shows another lobulated tumor mass. Laparotomy performed for beginning of intra-arterial infusion confirmed the scanning diagnosis.

They may have been replaced by tumor, abscess, cyst, scar, etc. There is one exception. The liver does not take up isotopes to the normal degree after high doses (4-5000 Rads) of therapeutic irradiation. For practical purposes the presence of isotopes means the presence of liver cells, failure of uptake means absence of them. The scans are never pathognomonic for any specific disease entity. Interpretation of them can be correct only if we know the patient's clinical history, physical, laboratory, and x-ray findings. This dictum holds for every diagnostic procedure. The overall accuracy of liver scanning is in the vicinity of 90% according to the latest figures.

The value of liver scanning is clearly shown in Figs. 1 through 4.

No other method can match the simplicity of liver scanning. We do not have to face the inherent inconveniences and risks of percutaneous cholangiography, or of the angiographic methods, or of percutaneous liver biopsy. In certain specific instances they are important to perform and they might be the method of choice. On the other hand, scanning is superior for routine purposes. If the question of a focal lesion in the liver is raised, scanning is the answer. The indications are following:

1. Demonstration of focal lesions at least 2 cms in diameter.
2. Preoperative and postoperative evaluation of focal lesions.
3. Estimation of the success of operative procedures, irradiation or chemotherapy of focal lesions.
4. In subphrenic abscess a combination of liver and lung scan might prove the diagnosis and show the exact location.
5. Valuable information can be gained with the same isotopes in cirrhosis and hepatocellular versus obstructive jaundice.

So far no contraindication is known, the low dose of radiation even permits studies in children. The only difficulty is lack of cooperation of the patient.

In summary: in a wide range of diseases liver scanning is indispensable in modern medicine.

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Special Article

Medicine in Transition

Changing Patterns of Medical Care*

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President Blewett, faculty, students, and guests of Westbrook Junior College:

It is an honor to be asked to attend your dining-in, and I hope in the next 20 minutes to give you an insight into the problems of medicine today – and perhaps stimulate a few of you to join us in trying to solve them. The title of my paper is "Changing Patterns in Medical Care," and it will be divided into two parts: first, the problems in world and national health; and secondly, some partial solutions that are now being proposed. The opinions expressed are my own, gleaned from experience, and reading, and are not necessarily those of my medical colleagues, nor of my wife.

The basic problem I wish to discuss is the huge shortage which is about to develop in medical manpower. This is directly related to the population explosion, and I would like to review a few population statistics for you, which you are probably hearing for the umpteenth time, but which still bear repeating.

In 1900 the world population was 1½ billion. This figure doubled to 3 billion by 1960 and will be 7 billion in the year 2000, and 100 years from now will be 23 billion. If our present rate of growth had existed since the birth of Christ, for every one of us in this room there would now be 20,000,000 people. Now this may seem a bit removed from medical problems, but is poses a severe moral problem for all health personnel, for, what good does one do by transplanting 100 artificial hearts and then lose 100,000 people because of pandemic disease, or from world famine? The U.S. Department of Agriculture states that there are now no major surpluses of foods left on the planet, and, moreover, despite population increases, total world food supply has not increased for 2 years.

On a global basis, therefore, medicine's greatest problem is undernutrition and diseases caused by poor sanitation, going hand in hand with overpopulation and poverty. But, not only are the poor nations becoming poorer, but they are actually losing health personnel at a rapid rate. Let's take Africa as one example, although the same could be said of South America and Asia. Some of the emerging nations on the African continent have only one physician for every 150,000 persons, and the overall average is one doctor for 50,000 Africans. And, despite the burgeoning population, many European physicians are leaving, and there is no one to replace them. The saddest fact of all is that many Africans, who obtain their medical training in Europe or America become seduced by the higher living standards and never return to their country of origin. If they do return, they find that their sophisticated techniques and operations of western medicine are not suitable to the health and economy of a poor and ill-equipped nation.

The rich nations have problems also, but of a different nature. Let's look at the U.S.A., the richest of all, with a gross national product of almost 800 billion dollars equalling the combined GNP of all western Europe, Japan, and the entire United Kingdom. If affluence makes for good health care, we should be number one, top of the list. Let's take a close look at just where we do stand.

In judging the quality of health care for a given area, there are two standard groups of statistics which are generally used: 1. Infant mortality; and 2. Life expectancy. Infant mortality is the number of babies per 1,000 population who did not survive past one year of age. In the U.S. in the year 1900, about 100 babies died out of 1,000; but in 1967, only 25 died out of 1,000. On the face of it we've come a long way, until we examine the situation more closely and note two disconcerting facts: First, all our improvement occurred between 1900 and 1945, and we have not improved one bit more in the past 20 years. In contrast, the United Kingdom's infant mortality rate in the past 20 years has declined 37%, and many other countries of Western Europe had similar rates of decline.

Fact number two: Despite our great affluence, the U.S.A. a decade ago ranked number 11 in infant mortality rates. Ahead of us were all the countries of Northern Europe, the United Kingdom, Japan, and Israel. That was a decade ago. Now we rank 18th. Today we are so far down the scale that Scandinavia and the Netherlands can boast an infant mortality rate almost half of our own. Even Massachusetts and Hawaii, our best states from this viewpoint, had mortality rates 38% higher than that of the entire country of the Netherlands.

The second criterion used in judging a country's health is life expectancy, so let's look at this. In 1900, the average American male lived for 48 years, and now he lives for 66 years. But, again – we have improved not one whit in the past 20 years, and, on a global basis, have dropped from a mediocre 13th to a shameful 22nd place. This might be a good time to point out, however, that you ladies now are outliving men by 7 years on the

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average, and your longevity is 10th place on a world basis.

So here we have the richest nation in the world finding itself about an overall number 20 on the health scale. This is even more remarkable when one considers the great contributions the United States has made and continues to make in medical research. Infectious diseases such as polio and measles have been almost eliminated in this country. Transplantation of hearts, kidneys and livers is almost a reality. The National Institute of Health, supported by government funds, has a research budget of over a billion dollars a year.

So we are faced with the paradox of being the most advanced country in the world medically, but far down on the list in national health. What is the reason? I submit that our failure is due to inadequate numbers of health personnel who are poorly distributed, and conduct their affairs inefficiently from the standpoint of the greatest good for the greatest number.

Let's look at nursing. Nursing schools are expanding rapidly, but 1/5 of all registered nurse positions in hospitals are vacant today. There is a present need for 75,000 R.N.'s and 25,000 practical nurses. There is a similar shortage of the various types of technologists – x-ray, lab workers, etc. – estimated to be in short supply by about 35,000. Physician shortages are the worst of all, and the U.S. Bureau of Health Manpower has estimated a shortage here of approximately 50,000. In the last 5 years the number of U.S. communities without a resident physician has tripled, and the number of medical school graduates entering general practice is in a steep decline. In 1950 there were 75 family physicians per 100,000 people; but in 1965, there were only 50 family physicians pere 100,-000 people. Ironically, the infusion of government moneys into research has lured many doctors away from private practice and into academic medicine. Moreover, great scientific advances, such as a heart transplant, require many hours of the time of many physicians for just one patient, leaving less time for the care of the multitude. So, on the one hand we have the government handing out huge sums of money to improve patient care; and, on the percentage basis, fewer grass roots doctors to do the work.

Our problem, if one accepts the foregoing, is primarily one of medical manpower – an insufficiency and an inefficiency. We have the medical abilities, but we have failed to distribute them properly. The solutions must revolve around increasing the efficiency of present health personnel and by increasing their numbers. The second part of this paper will be spent on ways in which this is being done.

Let us first look at advances in medical efficiency. Concepts of patient care are changing drastically, and, I am afraid, away from the personal toward the impersonal. Group clinics composed of doctors, plus varied types of health personnel, are springing up in many places. The government has also entered this area in an effort to solve the medical problem of urban ghettos, and, through the Office of Economic Opportunity, finances health clinics in the central city areas. The clinics are staffed by an internist, a pediatrician, a nurse and a social worker. Family health workers are recruited from the immediate area to assist in the operation of the clinics, and are trained by the center. In Boston, the Columbia Point Housing Development Center has such a clinic now operating and caring for 200 ambulatory patients weekly. New York City has 2 such programs and expects to have 31 more centers in a year, covering a population of ½ to 1 million. As for rural areas, regional hospitals, federally financed in large part, will be aiding the distribution of medical care to isolated communities – drawing its patients from a large geographic area to a central hospital.

One of the most important improvements in medical efficiency will come from the new uses of the computer. We are just on the threshold of the computer usage in medicine, but already the results are dramatic. In some clinics or hospitals now, such as the Kaiser Industries Permanente in California, all patients receive an analysis of 15 or 20 components of their blood, whether they need it or not. The complicated blood chemistry work is done entirely by automation. Computers decide whether the results are normal or abnormal, and the abnormal tests are printed in red ink. Not only is this leading to much earlier recognition of disease prior to any symptoms, but, amazingly, the cost is far less than was ever imagined. In intensive care units for seriously ill patients, computers now count the patients heart rate, respiratory rate, follow the blood pressure and EKG's and ring bells when the patients first begin to develop trouble. Computers can also scan thousands of electrocardiograms in minutes, diagnose the normal ones and separate out the abnormal ones for physicians to examine. At Cornell Medical School, computers are now analyzing complaints for 100 common diseases, and are making good diagnoses on the basis of the complaints alone. In Moscow, at the Russian Cancer Institute, computers have been fed with the physical findings on breast tumor patients, and have been asked to determine which ones are benign, and which ones malignant prior to surgery. The computer has been correct 94% of the time, whereas the Moscow physicians had a correct diagnostic rate of only 78%.

Work has also been done with computers in the x-ray field. X-rays are illuminated in such a way that each film has about 350,000 pinpoints of light, which are scanned by a computer in 1/3 of a second. Bone tumors can be diagnosed with considerable accuracy and studies are being done to develop a technique of measuring heart size by shadow areas. It may interest you to know that x-ray diagnosis is still more of an art than a science. Several years ago, hundreds of x-rays were sent to the finest radiologists in the country for their diagnoses. Each radiologist saw every one of the films, and there was a very wide divergence in diagnostic opinion by top specialists. Moreover, 2 years later, when the same films were sent

around again, the same doctors disagreed with their own former diagnoses almost 25% of the time.

Computers are also being used to scan chromosomes for abnormalities in genetic studies, and to scan cervix cells from vaginal smears for cancer screening. Automation of hospital records is around the corner, and in a decade or so, it is expected that every citizen's health record will be stored in the memory of a central national computer where it can be obtained immediately for study wherever the individual may be in the world.

Julian Huxley, brother of Brave New World Aldous, has made an interesting statement on computers, which needs some reflection. He has stated that the biggest contributions computers will make is not in higher productivity, but in the greater realization of all the possibilities; – and that what we must really seek is not greater efficiency but greater fulfillment. In the rough terminology of the computer programmers this can be expressed by the phrase, "Garbage In, Garbage Out." The computer will never be better than the physicians who feed it, so health personnel need not worry — they are here to stay. But, instead of cluttering up their days with mundane problems, they will be freed for the type of imaginative thinking that only the human brain can perform.

Now all this has been about methods of increasing the efficiency of existing doctors. But there is one more area we have not touched upon, and I have saved this for last because I think it is the greatest factor of all, and the one in which you might be the most interested – namely, the probability that in the future much of the work that doctors do today will be done by non-doctors, by so-called medical assistants, by mature young men and women like yourselves who don't wish to go through the whole medical school route, but who will become valuable as assistants to physicians.

Let us see what is happening in this field elsewhere in the world. The 1966 Congress of the World Health Organization had as its theme, "Partners in Health," and the opening remarks of the President stated that, "The training of medical auxiliaries is more important than any other undertaking in bringing benefit to mankind in the years ahead." I remind you that this is the President of the World Health Organization who made this statement. Let's glance around the world a bit: In the New Hebrides there are almost no physicians, and all medicine is primarily carried out by paramedical personnel. In the Netherlands, almost all babies are born at home, delivered by midwives; and yet, as you remember, their fetal mortality is almost half of that of the U.S. In England, 80% of deliveries are by midwives. In the U.S.A. we are beginning (of necessity) to catch on, and midwife deliveries are now legal in Kentucky, New Mexico, and in New York City (though not in the state of New York). I would like to stress that these are deliveries only of normal births and are always under the direct or indirect supervision of an obstetrician who takes care of any and all complications.

We have other precedents for this medical assistant care in the medical corps of our Army and Navy. The Navy, because of being spread all over the globe, has had to improvise programs using a hospital corpsman as a base. In the beginning, this corpsman performs simple tasks under close supervision. He then proceeds up the scale depending on his abilities, finally to the point where he performs rather complicated medical procedures sent to him by radio from hundreds of miles away. He is also called upon for various elements of the physical examination, application of casts, treatment of respiratory infections, and immunizing procedures.

A study projecting this military medicine into civilian life was done recently in Kansas City. Sixty-six ambulatory adults with chronic diseases were divided into two groups – one half received all of their care from nurses; the other half from physicians. All patients were re-evaluated after a year, and it was found that the nurse-treated group had received a quality of care and patient satisfaction, on a par with the physician-treated group. At the beginning of the study, most of the patients who were to be followed by nurses were dubious and wished they were in the physician group. At the end of a year, they had accepted the nurse care as being at least as good as physician care, provided, of course, that major medical problems had not arisen.

At the University of Colorado there is a pediatric nurse practitioner program in which each graduate nurse receives 4 months of intensive theory and practice in pediatrics, followed by 20 months in a low-income community setting. Here these well-trained nurses establish Child Health Stations where they conduct daily office hours for both well children and sick children, administer immunizations, and give psychological advice. Of course, very specific guide lines have been drawn up to assist them in judging when physician consultation is indicated.

In some rural areas of Ohio, medical assistants are doing physical examinations, and doctors examine the patient only when an abnormality is found. These Ohio personnel are informally trained by the local physicians. A formal course for medical assistantship is now a reality at Duke University in North Carolina. Here 4 ex-Navy Hospital corpsmen are presently taking 2-year course in medicine – the first of its kind in our country. These men are learning to do spinal punctures, resuscitate hearts, monitor breathing devices and perform hundreds of other tasks heretofore thought to be purely physician work. One of the students has described his job as having the same relation to a doctor as a practical nurse has to a registered nurse. The program has been so successful that Duke is increasing to 16 students next year. But more significant is the fact that there have been 1,500 applicants for these 16 positions.

We can be hopeful, then, that the future will see an increase in all the various health personnel necessary to deliver the best amount of medical care to the most amount of people. But it must be kept constantly in

mind that the proper distribution of these workers is of paramount importance. They are most needed in the heart of the big city and in the periphery of the country. The suburbs are the last place they need to go; but in a non-totalitarian state it could be the first place they end up. In order to insure proper distribution, it seems likely that the state will have to provide more and more inducements. This will be met by strong opposition from many in the medical field, and from many others who resent government interference in general. We must each make up our own mind about how much governmental control is warranted, and cast our vote accordingly. For my own part, as long as we remain in position number 20 in the world health scale, I feel we cannot pursue our traditional course in good conscience.

What does all this add up to for you students of Westbrook Junior College? To answer this, I would like to quote the concluding statement of a recent meeting of the National Committee on Interprofessional Care, held in Williamstown, Massachusetts, last summer:

"Health personnel in the near future are going to be in great demand. There is an immediate need to define these newly emerging occupations, so that new training programs will be initiated by vocational schools, and by junior colleges."

Thank you very much.

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State Of Maine

Department of Health and Welfare

Bovine Tuberculosis

JOHN M. WOODCOCK, D.V.M.*

Gone from our streets are the hunchbacks of yesteryear; the victims of bovine tuberculosis. During the 1880's, records indicate that tuberculosis was responsible for more than one-half the deaths due to disease.

In 1886 the entire herd at the University of Maine was condemned, and in 1887 a board called "The Maine Cattle Commissioners" was created by the Governor and Council. This was the forerunner of what is presently known as the Division of Animal Industry.

Records indicate that prior to 1900, the M.V.M.A. in cooperation with the U.S.D.A. – B.A.I. initiated a tuberculosis subcutaneous test. This was in response to the New England Cattle Commissioners who invoked an interstate regulation requiring permits and tuberculosis testing.

With an improved intradermal test, plus compulsory area testing, the eradication of bovine tuberculosis was formally initiated in 1917. This long range program was successfully completed in 1967, at which time Maine was recognized as the second State in the Union to be declared tuberculosis-free.

Much credit is due to the cooperative effort of the Division of Animal Industry, the U.S.D.A. and the practicing veterinarians, in achieving this goal of eradicating tuberculosis from our livestock.

It is of interest to note that fowl are occasionally affected with tuberculosis, and that cattle which are in close contact with infected fowl may become sensitized to the avian tubercle bacilli and show a reaction when subjected to routine testing. Of special interest to the medical profession is a case where six cows were slaughtered following a routine intradermal tuberculin test, with the absence of any visible lesions. Several others also exhibited suspicious reactions and were placed under quarantine. Cattle from adjacent farms were tested and found negative. Finally, the owner and his family submitted themselves to the intradermal skin test. The owner reacted to intermediate P.P.D. and underwent treatment. During his convalescence, a new herdsman was employed, and at a subsequent retest in 60 days no reactors or suspects were disclosed.

The Division of Animal Industry still conducts routine tuberculosis testing on a limited scale to insure that tuberculosis will never again become a disease problem among our livestock, and at the same time insure a wholesome meat and dairy supply to our ever-increasing population.

Bovine Brucellosis

Bang's disease, or contagious abortion, is the most frequent terminology used among cattlemen to identify this disease. As indicated by its name, this disease causes premature birth resulting in impaired milk production, difficult breeding, and the loss of an annual calf crop. This has, on occasions, caused serious financial loss to both the dairyman and the beef producer.

The infective organism Brucella abortus is most commonly located in the foetal membranes and fluids and frequently causes pathological changes in joints, udder and the uterus of adult animals. In the males, infection is commonly localized in the testes; however; most bulls remain immune in badly infected herds. Infection most commonly occurs through the gastro-intestinal tract, through feed contaminated by infected genital discharges also from contact with the aborted foetus. Prior and during the time Brucellosis was widespread in the State, cattlemen would frequently notice a fistula developing on the withers of their horses. Blood samples submitted from these horses invariably reacted to the agglutination test. Attempts were always made to have the owner dispose of the infected horse, and frequently his problem of Brucellosis would also disappear from his herd of cattle.

Veterinarians, livestock owners, and abattoir workers frequently become ill, as a result of their occupation, in handling and working with cattle infected with Brucellosis. Their illness was often diagnosed as undulant fever.

During the thirties, a few of the more progressive

*Department of Agriculture, Division of Animal Industry, Augusta.

dairymen voluntarily attempted to free their herds of Brucellosis. Infection in cattle during this period was high, and also widely disseminated throughout the State. This situation prompted action by both the U.S.D.A. and the Maine Department of Agriculture, and in 1941 a compulsory program was undertaken to eradicate this disease from the State. This program, that lasted for over twenty years, resulted in approximately 70,000 cattle being slaughtered. Indemnities paid for reactor animals exceeded $1,000,000. This expense was shared both by the State and Federal agencies. A program of this magnitude could not have succeeded without the cooperative effort of both State and Federal Departments of Agriculture, the livestock owner, and in particular the veterinarian, who deserves much credit for his efforts in arranging and conducting tests, advising and counseling the livestock owners as to the program that best suited his needs.

Present day activities have changed a great deal in the control of Brucellosis. Calfhood vaccination proved to be a wise adjunct in the control and elimination of this malady. A subsequent Brucella Ring Test was developed to test milk. This Ring Test is presently being conducted three times annually for all milk producers. Cattle sent for slaughter are identified by a special tag that is removed at the time of slaughter; a blood sample is then submitted to our laboratory for testing. This test is known as the Market Cattle Test. If a reactor is detected in either of above tests, the herd owner is immediately advised and his herd may be subjected to the well-known agglutination or blood test. By these methods, Brucellosis is currently kept under close surveillance, thus preventing any outbreak from occurring in the cattle industry.

Eradication was finally achieved on November 22, 1963. Maine then became the second State in the union to be declared free from Bovine Brucellosis.

Swine Brucellosis

Addenda: Brucellosis is present in some of our swine breeding herds. (Brucella suis)

The 102nd session of the Maine Legislature passed an act relating to *Brucellosis of Swine* thus enabling the Division of Animal Industry to proceed on a program to eliminate Brucella from swine, thus opening up markets now closed, and at the same time eliminate the hazard of contracting undulant fever by workers closely associated with the swine industry.

Have you made your reservations for the

1968 Annual Session of the

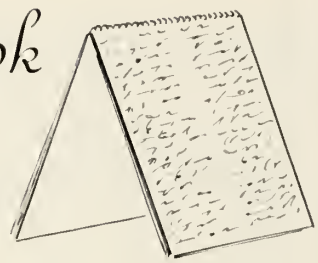
Maine Medical Association

June 9, 10 and 11 at The Samoset in Rockland.

YOUR RESERVATION CARD WAS MAILED TO YOU ON MAY 17TH

From the Secretary's Notebook





Summary of Proceedings, Interim Meeting, M.M.A. House of Delegates, April 7, 1968 at Brunswick, Maine

The interim meeting of the Maine Medical Association House of Delegates was called to order at 1:40 P.M. by the President-elect, Asa C. Adams, M.D. and was presided over by Robinson L. Bidwell, M.D., Speaker of the House. The total attendance was 62, including 36 delegates, 13 alternates, 10 members of the Council, the Secretary-Treasurer and two guests.

The financial statement of Income and Expenditures for fiscal year ending December 31, 1967 and budget proposed for fiscal year ending December 31, 1969 was presented by the Budget Committee, Drs. John D. Denison and Edward K. Morse. *Final action on the budget proposed for 1969 will take place at the annual meeting of the House of Delegates on June 9 at The Samoset, Rockland, Maine.*

The President-elect, Dr. Adams, announced the appointment of the following members to serve on the Nominating Committee: Stanley B. Sylvester, M.D., 1st District; Donald L. Anderson, M.D., 2nd District; Barbara L. Fuller, M.D., 3rd District; John P. Dow, M.D., 4th District; Bradley E. Brownlow, M.D., 5th District, Chairman and H. Douglas Collins, M.D., 6th District.

The report of the Nominating Committee shall be the first Order of Business at the Second Meeting of the House of Delegates on Sunday, June 9 at 3:00 P.M.

Resolutions

The following resolution on the future of Nursing Education in the State of Maine was submitted by the Somerset County Medical Society.

WHEREAS, the majority of nurses in employment today are graduates of hospital diploma schools, and these graduates have demonstrated over the years their ability to render the best possible care to the sick, and

WHEREAS, the demand for diploma school graduates continues to exceed the supply and probably will for the foreseeable future, and

WHEREAS, the present policies followed by the American Nurses Association and the National League for Nursing have not relieved nursing shortage in the country and, in fact, have contributed to the shortage by effecting the phasing out of diploma schools of nursing,

Therefore be it RESOLVED that the Maine Medical Association affirm its support of all nursing education programs, and be it further

RESOLVED that the Maine Medical Association acknowledge the contribution being made to our communities in the care of the sick by the hospitals that carry on diploma schools of nursing education and that they be urged to continue their schools and increase their enrollment to the fullest extent, and be it further

RESOLVED that physicians through the Maine Medical Association develop a strong leadership in planning the future of nursing education in the State of Maine.

This resolution was discussed at length and attention called to a program in nursing proposed by the University of Maine's Health Professions Education Committee. The Executive Director was instructed to write to the coordinator of this Committee and tell him that we are interested in diploma schools of nursing and we want them to know of our interest and to ask for information concerning their committee and their plans.

The following resolution was adopted by the 404th meeting of the Hancock Medical Society in Ellsworth on February 14, 1968.

WHEREAS, the Maine Medical Association has requested suggestions for revisions of the Maternal and Infant Care Program; and

WHEREAS, the Maine Commissioner of Health and Welfare has agreed to accept the recommendations of the Maine Medical Association Committee concerning the Maternal and Infant Care Program; and

WHEREAS, the Hancock County Medical Society has approved a revision of the Maternal and Infant Care Program;

Therefore be it, RESOLVED, that the Maine Medical Association House of Delegates go on record as being in favor of the Maternal and Infant Care revision as approved by the Hancock County Medical Society and suggests that the State of Maine Department of Health and Welfare adopt this Maternal and Infant Care revision for use in Hancock County.

Dr. Russell, Hancock County, asked that this resolution be tabled. The speaker ruled that this was not necessary because the meeting was informational only.

The Hancock County Society is working on a revised version of the MIC program which they hope will be acceptable to the Children's Bureau in Washington and which they hope will be accomplished before the June meeting of the House of Delegates.

Committee Reports

Rural Health, Sidney R. Branson, M.D., Chairman

It was brought out at a recent meeting on Rural Health that the prime problem today in this field, according to the AMA Council, is the improvement of emergency medical services in rural areas.

A study of rural and urban traffic fatalities in one large state showed that one and one-half times as many people were injured per 1,000 population in traffic accidents in rural counties (under 50,000 population) as contrasted with urban counties (over 500,000 population) and that people injured in rural counties were almost four times as likely to die of their injuries as those injured in urban counties, despite the occurrence of less severe accidents and more survivable injuries.

The higher case fatality ratio in rural areas seemed to be related to the inability to provide adequate first aid procedures and to get the person to a hospital within a reasonable period of time.

Not only traffic accidents, but accidents on the farm are pertinent here also; as emergency care and efficient transportation again become important factors in survival. This same state has about 760,000 disabling farm accidents per year.

Maine is a vast state with many areas of wilderness and small isolated communities and they do have their share of accidents – on the highways – on the farms – and in the woods. There should be trained personnel and equipment ready to render first aid and then, continuous supportive measures until the injured person arrives at a suitable medical facility where definitive treatment can be carried out.

The survival rate of our casualties in Vietnam is very high because of prompt, efficient emergency treatment and swift transportation to centers where hospital care is available.

The chief solution for us, is the establishment of rescue units in the towns and villages. A rescue unit consists of a group of laymen *trained* in rescue and first aid and a suitable vehicle or ambulance for transportation of the sick and injured. A Rescue Unit must also carry equipment to quickly free trapped victims. In the Greater Portland area there are five rescue units; Scarborough, Cape Elizabeth, Standish, and Windham. There must be some others existing in our state, but they are unknown to me. Rhode Island has 75 units at present offering emergency medical services.

Rescue Units should be formed, nurtured and supplied by many individuals and organizations in a Community. The local doctor should be in the forefront of the group, advising and coordinating the effort. Besides the numerous service clubs, he should utilize Boy Scouts, American Red Cross, 4-H Clubs, National Grange, American Farm Bureau, Cooperative Extension Services, U.S. Public Health Service, Veterans' groups, the local fire department, church groups.

The Council on Rural Health of the American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610, can be of great help. Dr. Bond L. Bible, Ph.D. is Secretary of the Council. Dr. G. S. Gudernatch, Sharon, Connecticut 06069, is also available for consultation at any time.

School Health, Marion K. Moulton, M.D., Chairman

The School Health Committee met on March 28, 1968 at Holiday Inn, Westbrook, Maine with the following members present: Marion K. Moulton, M.D., Chairman; George W. Bostwick, M.D.; Sidney R. Branson, M.D. and Lloyd G. Davies, M.D.

1. It was voted that the Association be asked to strongly recommend to the Commissioner of Education of the State Department of Education that a qualified person be found to become Director of Health Education, thus leaving the present Director of Physical Education and Health with physical education only; a position for which he is highly capable. This present director has expressed this need to the committee.

2. The committee recommends that increasing stress be made in all state institutions involved in the training of elementary and secondary teachers to more adequately equip them for the teaching of the various aspects of health (personal hygiene, health conservation, family living, mental health, drugs and tobacco, nutrition and diet, public health and sanitation, communicable disease control, water and air pollution, first aid, and advertising claims evaluation, among others).

3. The committee also recommends that the resolution which follows, and which was drawn up by the Committee on School Health of the Maine Tuberculosis Association be endorsed and a notice of this endorsement be sent to the Health Council of Maine.

RESOLVED: That knowledge of the several aspects of health (personal hygiene, health conservation, family living, mental health, drugs and tobacco, nutrition and diet, public health and sanitation, communicable disease control, air and water pollution, first aid, and advertising claims evaluation, among others), is of the utmost value to every person as an individual, and similarly, collectively on the part of its people to every community. Instruction in these matters should be presented to people while they are young when lasting habits and good attitudes can be developed. That these things be achieved successfully is of paramount importance to each generation and to its successor generations.

This education can be best carried out in the public school system of the state. Further, as the superstition and ignorance concerning health are still prevalent, and as many of the subjects requiring instruction are techni-

cal or highly sensitive (i.e., family living), health should be taught by trained and qualified instructors and not left to haphazard arrangements.

Therefore, be it further resolved, that the Health Council of Maine undertake a study in behalf of improved health throughout the state, in order to determine the status of health instruction in Maine schools, and to measure the quality of teacher preparation, as well as to plan a proper and sound program of health education for the State of Maine to recommend to the Governor, the Commissioner of the Department of Education, and the State Board of Education, and that it so instruct and charge its Committee on School Health. To meet necessary costs for this project, the committee may use the research monies previously received from the Maine Multidisciplinary Health Study Committee as well as donations subscribed and received for the purpose from member agencies of the Council.

4. It was suggested that this committee take some action regarding the practice of requiring students to take statements signed by their physicians to school before readmission following illness, particularly illness caused by one of the communicable diseases. It seems that many of these readmission slips are requested from physicians when no physician has been in attendance during the illness, and all evidences of that illness have disappeared. Signed statements under these conditions seem truly noncontributory to the prevention of the spread of communicable diseases. Also, when there has been no medical attendance, there is no proof of the actual occurrence of the claimed disease.

The committee agreed that a directive should be made to the Department of Education regarding the futility of these "slips" and a suggestion be made that a possible meeting with our committee might clarify this practice.

Government Medical Care, George E. Sullivan, M.D., Chairman

It was this committee's feeling that most of the federal legislation of medical significance has been covered in the occasional "across the desk" columns of the Editor of the Maine Medical Journal. It is the committee's hope that this informational column will appear in every issue of the Journal. The committee did, however, outline some bills that we thought would be of interest to this House.

1. HR 8765. In this bill, the Senate, last week, exempted income from advertising in non-profit organizations from being the subject of income tax. This must now be accepted by the House.

2. HR 15758. This bill extends the regional medical program for heart disease, cancer and stroke for five years. Doctor Phillip Lee, Assistant Secretary of H.E.W. testified in favor of this, as also did a representative of the American Association of Medical Colleges. Doctor DeBakey of Houston also testified, as did Doctor Sidney Farber of Boston.

Of interest was the appointment of Wilbur Cohen, the patron saint of the Welfare State, as secretary of Health and Welfare. Shortly after this, he announced his intent of broadening the welfare program and expanding Social Security benefits.

In line with the welfare state, we thought you might be interested in the cost of our own Medicare and Medic-Aid programs here in Maine.

In Part A of Medicare, a total of $15,788,356 was spent. This included:

$ 14,996,000 for in-patient care
$154,813 for out-patient care
$137,512 for home health services
$437,522 for extended care facility payments

Under Part B, physicians' payments were $4,670,878.

Under Title 19 or Medic-Aid from July 1st, 1966 to June 30th, 1967, there was spent a total of $8,177,790. Of this for

In-patient hospital payments	$1,536,616 was spent
Out-patient hospital	$ 51,194
Nursing homes	$4,673,081
Extended care facilities	$ 150,725
Home health services	$ 5,940
Payments to physicians	$1,760,234

From July, 1967 to January 1, 1968, $4,461,704 was spent. Of this for in-patient hospital care $1,144,467 was spent. (This was almost the total for the year before.)

Out-patient	$ 71,562
Nursing homes	$2,583,649
Extended Care facility	$ 75,708
Home health services	$ 6,543
Physicians	$ 579,775
This total	$4,461,704

By 1975, Medic-Aid or Title 19 must be fully implemented; this by federal fiat. In Maine, it is projected that 30% of the population will meet the definition of medical indigency. This plus the 10% who are now under Medicare adds up to a fairly sizable piece of the population of the State of Maine. From these figures I have given you, it can be projected that when Medic-Aid is fully implemented, the total cost will be in the neighborhood of $100 million. This means that the State of Maine must get up $25 million to get $75 million in matching funds.

It is the intent of Title 19 to furnish comprehensive health care services to all who can't afford it. When this intent is fulfilled, Title 19 will be the most far-reaching and costly health program in history.

89-749. Comprehensive Health Planning or Partnership for Health. The Health and Welfare Department of this State has been designated the single agency for this program. At present no advisory committee has been appointed. This is not a compulsory bill. Presently, Health Planning Agencies only recommend; they have no power. There is talk around Congress, however, that federal funds for health services and construction should legally have the blessing of Health Planning Agencies.

This means powerful control over projects and has far-reaching implications. Therefore, medical leadership at local levels is important.

89-239. Regional Medical Program or Heart Disease, Cancer and Stroke. As you are all aware, our regional program in Maine is Medical Care Development, Inc. We have a Board of Directors, the president of which is Doctor Merle Bacastow of Portland. We also have a program co-ordinator: Doctor Manu Chatterjee. This program has received planning grant monies and has applied for several operational grants. Of these, the following are known to the committee:

1. Visiting Guest Residents Program, which is actually in operation in four or five communities in the state: Millinocket, Rumford, Skowhegan, Augusta.
2. Smoking Control Program
3. Kennebec Valley Regional Health Agency

These requests for operational grants are now being reviewed in Washington.

Hill-Burton. This is still active. The major change is toward the development of regional hospitals and the tying-in of comprehensive health care programs with these hospitals. Recent proposed grants are:

1. Presque Isle and Caribou
2. Farmington – Livermore
3. Augusta – Gardiner

It is thought that these grants might be contingent on regional planning of everything from emergency room services to provisions of extended care facilities.

As we said at the outset, there are many federal legislative bills of medical significance that we thought the above mentioned were of the greatest interest to this House of Delegates – especially the projected magnitude of the Medic-Aid program.

Medical Aspects of Sports, Russell M. Lane, M.D., Chairman

Dr. Lane stated that his Committee has held one meeting this year and one clinic in Farmington which was attended by 5 physicians, 1 dentist, 1 physiotherapist and 1 lawyer. A questionnaire has been sent to all secondary schools in the State and 75% of these have been returned. He will have a more detailed report to present to the House of Delegates in June.

Malpractice Insurance Coverage, John P. Dow, M.D., Chairman

Dr. Dow again urged members to read their malpractice insurance policies and find out what they really have for coverage. He hopes eventually to work out a group plan for malpractice insurance and is open to suggestions.

Diabetes Committee, Melvin Bacon, M.D., Chairman

PRELIMINARY REPORT OF THE DIABETES DETECTION AND EDUCATION DRIVE IN THE STATE OF MAINE 1967

Another year and another report as Chairman of the Diabetes Committee of the Maine Medical Association. It was pleasing to me to serve in this capacity again.

The cooperation of the physicians, the Bureau of Health and Welfare, the Maine Pharmaceutical Association, Daniel F. Hanley, M.D., Executive Director of the Maine Medical Association and his staff, hospitals, colleges, industry service installations, public and parochial schools, newspapers, radio, television, and many public spirited citizens was magnificent. The Diabetes Detection and Education Drive could not have achieved the proportions that it did without their help and assistance.

A Chairman was chosen for the Diabetes Committee of each County Medical Society in the State. The program was coordinated with the Bureau of Health and Welfare, the Maine Pharmaceutical Association, and the Maine Medical Association as a combined effort. Radio, television, pamphlets, newspapers, movies, posters and personal contact were the media used.

The Diabetes Detection and Education Program was carried on, in part, as a year-round program. However, for the most part, the remainder was the result of a concerted effort during Diabetes Week, November 1967.

In closing, may I take this opportunity to thank all the participants in the Diabetes Program.

Associated Hospital Service proposed increase in M.M.A. Group Insurance rates was discussed and the Executive Director instructed to sign the contract for the coming year.

On motion by George W. Wood, III, M.D., the House voted to endorse Donald R. Hayes, M.D. of Massachusetts as a Trustee of AMA.

Charles F. Branch, M.D. called attention to the fact that there will be a Chief Medical Examiner in the State of Maine as of July 1, 1968.

It was announced that a $2,000 grant to the Maine Medical Education Foundation has been received from the American Cancer Society, Maine Division, Inc. Mr. Reginald Parker, Maine Division Treasurer, made this presentation at the meeting of the Council which preceded the Interim Meeting of the House of Delegates.

George W. Wood, III, M.D., Chairman of MEMPAC,



Grant to M.M.E.F. is presented to Paul S. Hill, Jr., M.D., M.M.A. President, by Mr. Reginald Parker, Treasurer, Maine Cancer Society while Charles F. Branch, M.D., M.M.A. Council Chairman looks on.

urged members to contribute to AMPAC-MEMPAC. One letter relative to their program has gone to members and a second will be mailed in May. Their program will be financed entirely by contributions to AMPAC.

The members were reminded that election of Councilors for the Third and Fourth Districts will take place at the Second Meeting of the House of Delegates on Sunday, June 9 at 3:00 P.M. – Third District (Knox, Lincoln-Sagadahoc), Fourth District (Kennebec, Somerset, Waldo).

In accordance with the M.M.A. Bylaws, "Nominations for members of the Council for any District where there is a vacancy shall be made by a *caucus of the members of the House of Delegates of that District.* Each candidate for Councilor must be a resident of the District for which he is nominated."

Adjournment at 4:10 P.M.

Maine Medical Association Special Committees 1967-1968

Liaison Committee Between the Maine State Bar Association and the Maine Medical Association

Maine Medical Association Members –

Edward G. Asherman, M.D., 275 Falmouth Rd., Falmouth – Chairman
John A. Woodcock, M.D., 35 Second St., Bangor
Linus J. Stitham, M.D., 50 Main St., Dover-Foxcroft
James H. Bonney, M.D., 229 Vaughan St., Portland
Loring W. Pratt, M.D., 177 Main St., Waterville

Maine State Bar Association Members –

Mr. Gerald E. Rudman, 96 Harlow St., Bangor – Chairman
Mr. John A. Platz, 183 Main St., Lewiston
Mr. James R. Desmond, 120 Exchange St., Portland
Mr. Carl R. Wright, 218 Water St., Skowhegan
Mr. Jack H. Simmons, 129 Lisbon St., Lewiston

Committee on Medical Emergencies, Transportation and Communication

Edward K. Morse, M.D., 22 White St., Rockland – Chairman
Francis J. O'Connor, M.D., 4 Woodlawn St., Augusta
John H. Shaw, M.D., 131 Sewall St., Augusta
Richard C. Dillihunt, M.D., Maine Medical Ctr., Portland
Robert E. McAfee, M.D., 18 Bramhall St., Portland
Niles L. Perkins, M.D., R.F.D. #1, Bowdoinham
Paul S. Hill, Jr., M.D., 323 Main St., Saco (Ex officio)

Advisors to the Maine Association of Medical Assistants

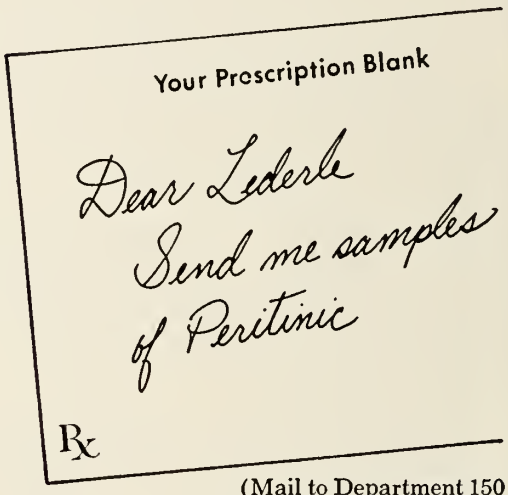
Benjamin L. Shapero, M.D., 431 State St., Bangor
John H. Shaw M.D., 131 Sewall St., Augusta
Carl A. Brinkman, M.D., 50A Flaggy Meadow Rd., Gorham
Clement A. Hiebert, M.D., 18 Bramhall St., Portland

Committee on Government Medical Care

George E. Sullivan, M.D., R.F.D. #1, Fairfield – Chairman
John F. Dougherty, M.D., 112 Front St. Bath
Ernest W. Stein, M.D., 72 Main St., Pittsfield
Thomas A. Martin M.D., 157 Pine St., Portland
Asa C. Adams, M.D., 68 Main St., Orono
Niles L. Perkins, M.D., R.F.D. #1, Bowdoinham
Charles R. Glassmire, M.D., 37 Deering St., Portland
Kevin Hill, M.D., 33 College Ave., Waterville

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* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. (Now isn't that a good idea in an iron-containing hematinic?)

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Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate. Until adequate data are available to establish safety in early pregnancy, hydroxyzine is contraindicated during this period.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants such as narcotics and barbiturates. In conjunctive use, dosage for these drugs should be decreased as much as 50%. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. Hydroxyzine parenteral solution for intramuscular use should be injected well within the body of a relatively large muscle. In adults, the preferred sites are the upper outer quadrant of the buttock (i.e., gluteus maximus), or the mid-lateral thigh. In children, preferably the mid-lateral muscle of the thigh. In infants and small children the upper outer quadrant of the gluteal region should only be used when necessary, as in burn patients, in order to minimize the possibility of damage to the sciatic nerve. The deltoid area should be used only if well developed, such as in certain adults and older children, and only with caution to avoid radial nerve injury. Injections should not be made in the lower and middle thirds of the upper arm. Aspiration should be done to help avoid intravascular injection. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or possibly periarterial extravasation. Therefore, particular caution (aspiration and site injection) should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose. In order to avoid possible adverse effects it is recommended that hydroxyzine parenteral solution be diluted to at least 50 cc. with sterile normal saline and administered over a period of four minutes or more, preferably into the tubing of a running intravenous infusion.

The intravenous administration of this drug is not recommended for children under 12 years of age.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may occur with higher doses. Involuntary motor activity, including rare instances of tremor and convulsions, has been reported, usually with higher than recommended dosage.

When this product is given intravenously undiluted, minimal amounts of intravascular hemolysis occur at the site of injection. Giving the maximum recommended intravenous dose (100 mg.) to adults results in immediate transient hemolysis with the liberation of a total of 2-3 grams of hemoglobin, which, in some individuals, can cause small amounts of hemoglobinuria. This compares with the normal red cell destruction from which approximately 8 Gm. of hemoglobin are liberated every 24 hours. If the hydroxyzine is diluted with 50 cc. of normal saline and given during a period of four minutes or more, this phenomenon does not occur.

Supply: Vistaril (hydroxyzine pamoate) Capsules: Equivalent to 25 mg., 50 mg., 100 mg. hydroxyzine HCl. Vistaril (hydroxyzine pamoate) Oral Suspension: Equivalent to 25 mg. hydroxyzine HCl per 5 cc. teaspoonful. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10 cc. vial and 50 mg./cc.—2 cc. and 10 cc. vial; Isoject,® 25 and 50 mg. per cc., 1 cc. per unit.

More detailed professional information available on request.

References: 1. Greenhouse, H.R.: Medication and the Dependent Personality, Symposium of Non-Narcotic Drug Dependency and Addiction, The Amer. Psychiat. Assn., N.Y. County Dist. Branch, New York, N.Y., March 10, 1966.

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017


burning
itching
discharge
of trichomonal vaginitis...

Flagyl®

tablets/inserts

brand of

metronidazole

brings

- clinical cures
- microscopic cures
- culture cures

For the most widespread form of vaginitis the most widely successful therapeutic agent, Flagyl, is clearly indicated.

In trichomonal vaginitis, most physicians have reported a cure-rate of 95 per cent or more with Flagyl when infected male partners are treated concurrently and when treatment is repeated for occasional refractory infections in women.

Among the few patients who do not respond to Flagyl are those who may not have taken the prescribed dosage and those who may have been reinfected.

This high rate of cure obtained with Flagyl is unparalleled. Only systemically active Flagyl reaches the hidden reservoirs of reinfection in male and female genitourinary tracts.

Indications: Flagyl is indicated only in the treatment of trichomoniasis in both the male and female.

Contraindications: Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution: Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side effects: Infrequent and minor side effects include nausea, metallic taste and furry tongue. Gastrointestinal disturbances, flushing and headache sometimes occur, especially with concomitant ingestion of alcohol. The taste of alcoholic beverages may be altered. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness or paresthesia of an extremity, joint pains, confusion, irritability, weakness, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

Dosage and Administration: In women: one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.

In men: When trichomonads are demonstrated, one 250-mg. oral tablet twice daily for ten days in conjunction with treatment of his female partner.

Dosage Forms: Oral tablets—250 mg.
Vaginal inserts—500 mg.

SEARLE

Research in the Service of Medicine

The AMBAR SCRAPBOOK of Obesity Oddities

FACT & LEGEND



GALLSTONES HAVE BEEN FOUND IN 60% OF PATIENTS WHO WEIGH MORE THAN 300 POUNDS, 45% HAVE DIABETES, AND 15-TO-20% HAVE HIGH BLOOD PRESSURE.

SOURCE: DUNCAN, G.G.: SCIENCE NEWS LETTER, 83:403 (JUNE 29) 1963.

NAPOLÉON BONAPARTE

LOST THE BATTLE OF WATERLOO BECAUSE HE WAS TOO FAT!

ACCORDING TO THE NEW YORK TIMES OF APRIL 13, 1890, THE DEFEAT OCCURRED BECAUSE HE FAILED TO CHECK HIS INTELLIGENCE INFORMATION. "IT WAS A MATTER OF MERE INDOLENCE AND THIS INDOLENCE WAS CAUSED BY FAT."

SOURCE: JAMA 186:65 (OCT. 5) 1963.





THE BOOK *"PRAY YOUR WEIGHT AWAY"* URGES READERS TO "ASK GOD TO HELP YOU LIKE EXERCISE" FOR 15 MINUTES A DAY.

SOURCE: REV. C.W. SHEDD: NEW YORK, LIPPINCOTT, 1958.

DIET DROPOUTS ACCORDING TO DRS. SHIPMAN AND PLESSET "APPARENTLY NO DIETER SUCCEEDS WHO IS VERY ANXIOUS OR DEPRESSED."* THE AMBAR FORMULA PROVIDES **METHAMPHETAMINE** TO HELP **ELEVATE** THE **MOOD** AND **PHENOBARBITAL** TO HELP REDUCE **ANXIETY.**

*SOURCE: ARCHIVES OF GENERAL PSYCHIATRY 8:26 (JUNE 1963).

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

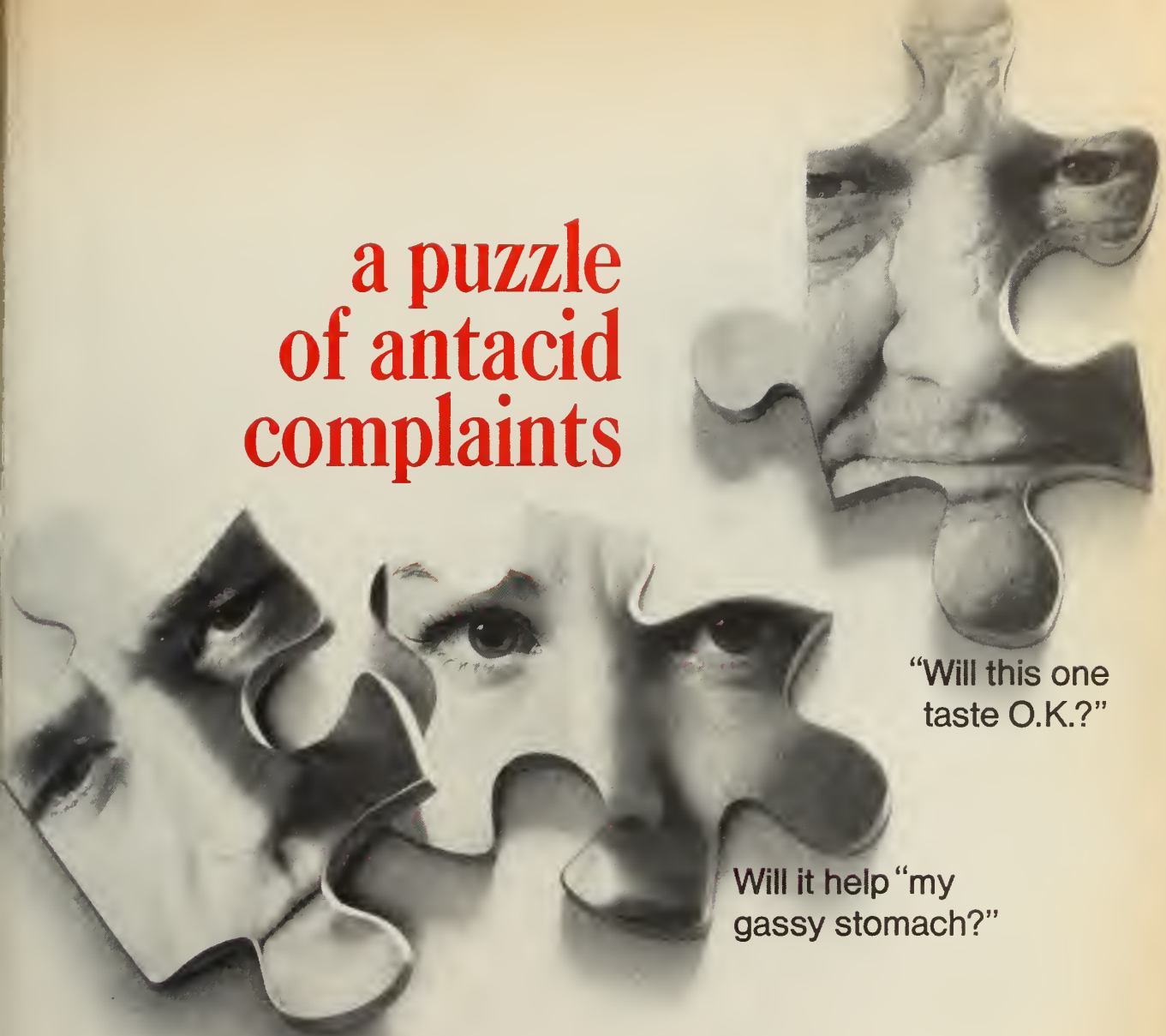
One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A·H·ROBINS

a puzzle of antacid complaints



Mylanta®

aluminum and magnesium hydroxide *plus* simethicone

a solution to peptic ulcer distress

Effective neutralization—
with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

Concomitant relief of G.I. gas distress—
with the proven[1] defoaming action of simethicone.

Prolonged acceptance confirmed—
in 87.5% of 104 patients after a total of 20,459 documented days of therapy.[2]

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg.
Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

References: 1. Hoon, J. R.: Arch. Surg. *93*:467 (Sept.) 1966.
2. Danhof, I. E., Personal communication.

Stuart

Division/Pasadena, Calif.
ATLAS CHEMICAL INDUSTRIES, INC.

When the agitated geriatric disrupts the home...

His daughter can't please him. There is "just no living with him."

His disturbances at the table make every meal a nightmare.

His teen-age granddaughter won't invite friends home because of his outbursts.

His slovenly room and habits create more tension.



In moderate to severe anxiety...

- Mellaril helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- Mellaril often alleviates anxiety-induced somatic complaints
- Mellaril frequently helps strengthen emotional resources
- Mellaril helps the patient maintain realistic contact with environment, closer harmony with family

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

for moderate to severe anxiety

Mellaril® (thioridazine) 25 mg. t.i.d.

SANDOZ

Before prescribing, see package insert for full product information.

68-114

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Modified-Fat Dietary Management of the Young Male With Coronary Disease

A prospective study was begun in 1959 to examine the effects of two moderately low-fat diets (one being relatively high in polyunsaturated fatty acids) upon serum lipids and coronary heart disease morbidity and mortality. . . . It was intended also to determine whether reducing the serum cholesterol value would decrease recurrence and mortality rates in men with established coronary heart disease, . . .

The subjects were randomly assigned to one of the two dietary patterns utilized, both containing approximately 28% of the calories from fat. . . . Diet 1 had a mean cholesterol content of 260 mg/day and diet 2, 395 mg/day. The ratio of polyunsaturated fats to saturated fats of diet 1 was 3:1 and of diet 2, 1:3.

. . . In an early report it has been noted that at the 28% fat level, with use of diets with an exogenous cholesterol level below 400 mg/day and with a P/S ratio of either 3:1 or 1:3, the cholesterol-level lowering effects after one year were identical. The same experience was noted after five years of observation. . . .

For convenience, death rates are expressed as deaths per 100,000 man-years. Thus, the non-dietary-managed group had a 160% higher recurrent infarction rate and a 233% higher death rate than did the study group during the first five-year period of observation.

Submitted by Jacob B. Dana, M.D., Maine Heart Association

Reference — Bierenbaum, M. L., et al, JAMA, Vol. 202, pages 1119-1123, 1967

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Antibodies in the Blood of Cancerous Animals

MIAMI, FLORIDA — Scientists at the University of Miami have found that antibodies — presumably formed to fight the disease — appear in the blood of cancerous animals.

Some of these disease-fighting proteins, however, may cancel out the anti-disease activity of others.

This was reported recently by the American Cancer Society in an account of research by Drs. M. Michael Sigel and Ruth A. Fugmann of the University of Miami School of Medicine and Variety Children's Research Foundation.

The investigators have employed several delicate chemical analytical methods to identify and measure the antibodies which form in the blood of hamsters and chickens as they develop cancers following virus injections.

Antibodies are protein molecules which clump, or destroy, or otherwise inactivate foreign cells and viruses. They come in several shapes and sizes and usually are specific for the particular target on the cell or virus they were created to attack.

Some types of antibody have been shown to kill cells better than others. They work in collaboration with another group of serum proteins called complement fractions.

Drs. Sigel and Fugmann have tested the blood of hamsters in which cancer has been caused by injections of adenovirus. This virus comes from humans, where it causes only cold-like symptoms. They also have examined the blood of chickens in which other virus-induced cancer was growing.

One intriguing discovery was that all the antibodies identified were what is known as 7S antibodies. It is generally believed that 19S antibodies are the potent cell-destroying proteins; and many feel that 7S antibodies may interfere with 19S antibodies by covering up the antigen targets which 19S antibodies normally attack.

The scientists now will examine the blood of hamsters and chickens in the early stages of cancer development to determine whether there are anti-cancer 19S or 7S antibodies present at this stage. If the 19S antibodies are there, one possible conclusion is that as cancer develops it causes a shift from the protective 19S antibodies to increasing concentrations of 7S antibodies.

American Cancer Society News Service Release

Program - 115th Annual Session Maine Medical Association

June 9, 10, 11, 1968

The Samoset, Rockland

Arranged by the Scientific Committee

WALDO A. CLAPP, M.D., Lewiston
Chairman

MERLE S. BACASTOW, M.D., Portland

HAROLD D. CROSS, M.D., Hampden Highlands



Dr. Clapp

Sponsors:

The Scientific Program for the annual session of the Maine Medical Association in cooperation with the Technical Exhibitors and the Council of the Maine Medical Association is made possible this year by grants from:

Merck Sharp & Dohme Postgraduate Program
West Point, Pennsylvania

Eli Lilly and Company State Medical Convention Program
Indianapolis, Indiana

For this cooperation and support, the members of the Scientific Committee are grateful.

Information

Registration:

Registration throughout the session will be in the Lobby at The Samoset. Registration fee $1.00.

Sunday	June 9	9:00 A.M. to 5:30 P.M.
Monday	June 10	9:00 A.M. to 6:00 P.M.
Tuesday	June 11	9:00 A.M. to 4:30 P.M.

Telephone: The number at The Samoset is Rockland, 594-8411.

Visiting Delegates:

Introduction of Visiting Delegates will take place at meetings of the House of Delegates on Sunday, June 9 or at the General Assembly, Monday afternoon, June 10.

Scientific and Special Exhibits:

These exhibits, which are listed on page 108, will be located in the Ballroom.

Technical Exhibits:

This year thirty-nine companies are contributing to the success of the annual session program by participating in the Technical Exhibits. A list of the exhibiting companies and representatives will be found on page 109 of this program.

Please show your appreciation by visiting these exhibits which you will pass on your way through the Lobby en route to the Ballroom (where the Scientific Sessions will be held), to the Dining Room or to the Golf Course.

Sunday, June 9

9:30 A.M. First Meeting of the House of Delegates

Call to order: ASA C. ADAMS, M.D., President-elect

Presiding: Speaker of the House, ROBINSON L. BIDWELL, M.D.

Presentation of the A. H. Robins' Physician Award for Community Service

12:30 P.M. Luncheon

3:00 P.M. Second Meeting of the House of Delegates

4:30 P.M. Meeting of MEMPAC

6:30 P.M. Dinner

Speaker: MR. LUCIEN O. HOOPER, W. E. Hutton & Company, New York, New York

Subject: **Investing in an Inflationary Economy**

Monday, June 10

Scientific Program

9:30 A.M. to 12:30 P.M.

Presiding – MERLE S. BACASTOW, M.D.

Scientific speakers are supported by a grant from the Merck Sharp & Dohme Postgraduate Program.

9:30 A.M. **Medical Genetics**
VICTOR A. MCKUSICK, M.D., Professor of Medicine, The Johns Hopkins Hospital, Baltimore, Maryland

10:30 A.M. **Panel – The Philosophy and Ethics of Cardiac Transplants**
Moderator: ALLAN D. CALLOW, M.D., Professor of Surgery and Chief of Vascular Service, Tufts University School of Medicine-New England Medical Center Hospitals, Boston, Massachusetts

Panelists:

J. L. SHERMAN, JR., M.D., Medical Director and Director of Medical Education, Maimonides Medical Center, Brooklyn, New York

HANNIBAL HAMLIN, M.D., Neurosurgeon, Chief of Outpatient Clinic, Massachusetts General Hospital and Consultant at Rhode Island Hospitals, Providence, Rhode Island

EMERSON H. DRAKE, M.D., Chief of Surgery, Maine Medical Center, Portland, Maine

12:30 to 2:00 P.M. Luncheon

Scientific Program

1:30 to 4:30 P.M.

Presiding – WALDO A. CLAPP, M.D.

Sponsored by the Maine Chapter, American College of Surgeons, the Maine Trauma Committee and the Maine Medical Association's Committee on Medical Aspects of Sports

1:30 P.M. Business Meeting, Maine Chapter, American College of Surgeons

2:00 P.M. **The Mount Washington Cog Railway Disaster**
HARRY C. MCDADE, M.D., F.A.C.S., Littleton, New Hampshire

Disaster Resources in Maine
MR. WILLIAM CARNEY, Director, Division of Hospital Services, Department of Health and Welfare, Augusta, Maine

3:30 P.M. **The 10th Winter Olympics**
LAWRENCE CRANE, M.D., Portland, Maine, Physician, U.S. Olympic Team, 10th Winter Games, Grenoble, France

DANIEL F. HANLEY, M.D., Brunswick, Maine, Physician, U.S. Olympic Team, 10th Winter Games, Grenoble, France

4:30 P.M. **General Assembly**

Presiding, PAUL S. HILL, JR., M.D., President

President's Address

Election of President-elect

6:00 to 7:00 P.M. Social Hour, Dutch Treat, Ballroom

7:00 P.M. **Annual Banquet**

Invocation, REVEREND GERALD BURTT, Saco, Maine

Presentation of Honorary Pins

Speaker: RUSSELL H. MORGAN, M.D., Radiologist-in-Chief, Department of Radiology, The Johns Hopkins Hospital, Baltimore, Maryland

Subject: **Physician Assistants: Their Role in Medicine in the Years Ahead**

Tuesday, June 11

Scientific Program

9:30 A.M. to 12:30 P.M.

Presiding – HAROLD D. CROSS, M.D.

Sponsored by the Maine Chapter, American Academy of General Practice.

9:30 A.M. **Drug Abuse**
MAURICE H. SEEVERS, M.D., Professor and Chairman, Department of Pharmacology, the University of Michigan Medical School, Ann Arbor, Michigan

10:30 A.M. **Panel – Drug Abuse**
WILLIAM E. SCHUMACHER, M.D., Director, Bureau of Mental Health, Department of Mental Health and Corrections, Augusta, Maine

DONALD B. LOURIA, M.D., Associate Professor in Medicine, Cornell University Medical College, New York, New York

12:30 to 2:00 P.M. Luncheon

Scientific Program

2:00 P.M.

Presiding – WALDO A. CLAPP, M.D.

Sponsored by the Maine Medico-Legal Society

Office of Chief Medical Examiner
CHARLES F. BRANCH, M.D., Auburn, Maine, Chief Medical Examiner, State of Maine

Narcotics and Dangerous Drugs
Speaker: To be announced

Organized Crime
Speaker: To be announced

6:30 P.M. Lobster Bake

Presentation of Golf Prizes by
DANIEL R. SHIELDS, M.D., Lewiston, Chairman, Golf Tournament

Specialty Group Meetings

Monday, June 10

12:30 P.M. — Luncheon Meetings

SECTION ON OPHTHALMOLOGY OF THE M.M.A.

ONNI C. KANGAS, M.D., Rockland, presiding

Contact Lens-Fitting Problems
PERRY ROSENTHAL, M.D., Boston, Massachusetts

MAINE CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

RUSSELL A. MORISSETTE, M.D., Lewiston, presiding

Chromosones of Abortion
R. J. MCKAY, JR., M.D., Professor of Pediatrics, University of Vermont Medical School; District Chairman of American Academy of Pediatrics, Burlington, Vermont

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1:00 P.M. — Luncheon Meeting

MAINE SOCIETY OF ANESTHESIOLOGISTS

VALENTINE J. MOORE, M.D., Waterville, presiding

2:00 to 4:00 P.M.

MAINE PSYCHIATRIC ASSOCIATION

Supported in part by a grant from the Merck Sharp & Dohme Postgraduate Program.

NICHOLAS FISH, M.D., Portland, presiding

A New Face of an Old Discipline; Social and Community Psychiatry
JACOB CHRIST, M.D., Psychiatrist in Charge, Outpatient Clinic, McLean Hospital, Belmont, Massachusetts

Recent Innovations and Observations in Psychopharmacology
ALBERTO DIMASCIO, M.D., Director, Psychopharmacology Research, Massachusetts Mental Health Center, Boston, Massachusetts

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MAINE SOCIETY OF CLINICAL HYPNOSIS

HAROLD N. BURNHAM, M.D., Gorham, presiding

Hypnosis and the Management of Pain; a Clinical Evaluation
ANDREW E. ST. AMAND, M.D., Anesthesiologist, Lahey Clinic, Boston, Massachusetts

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MAINE THORACIC SOCIETY AND THE MAINE SOCIETY OF INTERNAL MEDICINE

LLOYD BROWN, M.D., Bangor, presiding

Pediatric Respiratory Care
LEONARD S. BUSHNELL, M.D., Director, Intensive Care Unit, Beth Israel Hospital, Boston, Massachusetts

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Tuesday, June 11

10:00 A.M. — Business Meeting

MAINE MEDICO-LEGAL SOCIETY

RICHARD C. WADSWORTH, M.D., Bangor, President, presiding

12:30 P.M. — Luncheon Meeting

MAINE RADIOLOGICAL SOCIETY

JOHN T. CHEN, M.D., Waterville, presiding

The Manpower Shortage in Radiology: Fact or Fiction
RUSSELL H. MORGAN, M.D., Radiologist-in-Chief, Department of Radiology, The Johns Hopkins Hospital, Baltimore, Maryland

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2:00 to 4:00 P.M.

EAR, NOSE AND THROAT GROUP

LORING W. PRATT, M.D., Waterville, presiding

Cryosurgery in Otolaryngology
CHARLES L. HILL, M.D., Surgeon, Rhode Island Hospital, Providence, Rhode Island

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SPECIAL NOTICES

Election of President-elect
The election of a President-elect will take place at the General Assembly, June 10 at 4:30 p.m.

Election of Councilors
Election of Councilors for the following Districts will take place at the Second Meeting of the House of Delegates on Sunday, June 9 at 3:00 p.m.

Third District – Knox, Lincoln-Sagadahoc
Fourth District – Kennebec, Somerset and Waldo

In accordance with the By-Laws, "Nominations for members of the Council for any District where there is a vacancy shall be made by a caucus of the members of the House of Delegates of that District. Each candidate for Councilor must be a resident of the District for which he is nominated."

Council Meetings
The Council will meet on Saturday, June 8 and daily throughout the session at a time and place to be announced.

Committee Meeting
The Committee on the Medical Aspects of Sports, Luncheon Meeting, Tuesday, June 11.

Tufts Medical Alumni Reunion
Monday, June 10, 5:00 to 7:00 p.m.

MEMPAC Meeting
The Maine Medical Political Action Committee will meet on Sunday, June 9 at 4:30 p.m. All Maine Medical Association members welcome.

For the Ladies
The Woman's Auxiliary to the Maine Medical Association is sponsoring a Wine Tasting Party from 11:00 a.m. to 1:00 p.m. on Monday, June 10.

Golf Tournament
Daniel R. Shields, M.D., Lewiston, Chairman

HONORARY PINS

Introduction of the Association's Honorary Pin Recipients will be made by Paul S. Hill, Jr., M.D., President of the M.M.A., at the Annual Banquet, Monday evening, June 10 at 7:00 P.M.

FIFTY-YEAR PINS

Fifty-Year Lapel Pins will be presented to the following members who were graduated from Medical School in 1918:

Cumberland County
William E. Freeman, M.D., Yarmouth
Bowdoin Medical School

Knox County
Harry A. Naumer, M.D., Port Clyde
Columbia University
College of Physicians and Surgeons

Oxford County
Roswell E. Hubbard, M.D., Waterford
Bowdoin Medical School

Penobscot County
W. Merritt Emerson, M.D., Bangor
University of Vermont College of Medicine

Piscataquis County
Charles N. Stanhope, M.D., Dover-Foxcroft
Bowdoin Medical School

Somerset County
John D. Southworth, M.D., Hartland
Johns Hopkins University School of Medicine

FIFTY-FIVE-YEAR PINS

Fifty-Five-Year Pins will be presented to the following members who received Fifty-Year Pins in 1963:

Androscoggin County
Ralph A. Goodwin, Sr., M.D., Auburn
Harvard Medical School

Cumberland County
Jacob Melnick, M.D., Portland
Boston College of Physicians and Surgeons

Albert W. Moulton, Sr., M.D., Portland
Bowdoin Medical School

Kennebec County
Ralph L. Reynolds, M.D., Waterville
Harvard Medical School

SIXTY-YEAR PINS

Sixty-Year Pins will be presented to the following members who received Fifty-Year Pins in 1958:

Penobscot County
Allan Craig, M.D., Pacific Grove, California
McGill University Faculty of Medicine

Somerset County
Henry E. Marston, M.D., North Anson
Bowdoin Medical School

SIXTY-FIVE-YEAR PIN

A Sixty-Five-Year Pin will be presented to the following member who received his Fifty-Year Pin in 1953:

Lincoln-Sagadahoc County
Warren E. Kershner, M.D., Bath
Maryland Medical College

Visiting Delegates

The Connecticut State Medical Society
PAYSON B. AYRES, M.D., Greenwich
NORMAN H. GARDNER, M.D., East Hampton

The Massachusetts Medical Society
H. THOMAS BALLANTINE, M.D., Boston

New Hampshire Medical Society
JESSE M. GALT, M.D., Dover

Medical Society of the State of New York
THURMAN B. GIVAN, M.D., Brooklyn

The Rhode Island Medical Society
HANNIBAL HAMLIN, M.D., Providence

Vermont State Medical Society
B. ALBERT RING, M.D., Burlington

Delegates to Out-of-State Meetings

The Connecticut State Medical Society
GEORGE W. WOOD, III, M.D., Brewer

The Massachusetts Medical Society
WILLIAM L. MACVANE, JR., M.D., Portland

The New Brunswick Medical Society
HAZEN C. MITCHELL, M.D., Calais

New Hampshire and Vermont State Medical Societies
PAUL S. HILL, JR., M.D., Saco

Medical Society of the State of New York
PAUL S. HILL, JR., M.D., Saco

The Rhode Island Medical Society
LEONARD G. MIRAGLIUOLO, M.D., Bangor

County Delegates

FIRST DISTRICT

Cumberland County Medical Society
Delegates: Stanley B. Sylvester, M.D., Portland, Secretary
(2 years)
Louis N. Taxiarchis, M.D., Portland
Sidney R. Branson, M.D., So. Windham
Eugene P. McManamy, M.D., Portland
George F. Sager, M.D., Portland
(1 year)
Charles W. Capron, M.D., Portland
Robert W. Agan, M.D., Portland
Martin A. Barron, Jr., M.D., Portland
Stanley G. Dienst, M.D., Portland
Bernard Givertz, M.D., Portland
Thomas F. Conneen, M.D., Portland
Alternates
(2 years)
Houghton M. White, M.D., Brunswick
John R. Davy, M.D., Portland
Paul V. Davis, M.D., Bridgton
Robinson L. Bidwell, M.D., Portland
(1 year)
Robert E. McAfee, M.D., Portland
Edmund W. Hardy, M.D., Falmouth
William L. MacVane, Jr., M.D., Portland
Edward C. Matthews, M.D., Portland
Douglass C. Pennoyer, M.D., Portland
Alphonse Telfeian, M.D., Portland

York County Medical Society
Delegates: Charles W. Kinghorn, M.D., Kittery, Secretary
Carl E. Richards, M.D., Sanford
Robert F. Ficker, M.D., Kennebunkport
Thomas Anton, M.D., Biddeford
Alternates
Kenneth E. Leigh, M.D., York
Stephen A. Cobb, M.D., Sanford
Irvin Dorfman, M.D., Biddeford

SECOND DISTRICT

Androscoggin County Medical Association
Delegates: Donald L. Anderson, M.D., Lewiston, Secretary
Daniel R. Shields, M.D., Lewiston
Joseph J. Rando, M.D., Lewiston
Frederick B. Lidstone, M.D., Auburn
Wilfrid A. Cloutier, M.D., Lewiston
Alternates
Paul J. Fortier, M.D., Lewiston
Philip L. Archambault, M.D., Lewiston
Gerard L. Morin, M.D., Lewiston
Donald H. Horsman, M.D., Auburn

Franklin County Medical Society
Delegates: Hays G. Bowne, M.D., Farmington, Secretary
Paul E. Floyd, M.D., Farmington
Alternate
Wallace H. Duffy, M.D., Farmington

Oxford County Medical Society
Delegates: Hagop Halladjian, M.D., Rumford, Secretary
Linwood M. Rowe, M.D., Rumford
Harry L. Harper, M.D., South Paris
Alternates
Dexter E. Elsemore, M.D., Dixfield
Joelle C. Hiebert, M.D., Norway

THIRD DISTRICT

Knox County Medical Society
Delegates: Barbara L. Fuller, M.D., Rockland, Secretary

Thomas W. Williams, M.D., Rockland
Onni C. Kangas, M.D., Rockland

Alternate
Mustafa V. Onat, M.D., St. George

Lincoln-Sagadahoc County Medical Society
Delegates: George W. Bostwick, M.D., Newcastle, Secretary
Carl R. Griffin, Jr., M.D., Boothbay Harbor
Ralph C. Powell, M.D., Damariscotta

Alternates
Nelson P. Blackburn, M.D., Bath
Paul A. Fichtner, M.D., Bath

FOURTH DISTRICT

Kennebec County Medical Association
Delegates: Francis A. Spellman, M.D., Togus, Secretary
Alfredo Monsivais, M.D., Winthrop
Earle M. Davis, M.D., Waterville
Valentine J. Moore, M.D., Waterville
Brinton T. Darlington, M.D., Augusta
Allan J. Stinchfield, M.D., Augusta
John C. Patterson, M.D., Augusta

Alternates
Richard T. Chamberlin, M.D., Waterville
Richard L. Chasse, M.D., Waterville
Theodore M. Russell, M.D., Augusta
John H. Shaw, M.D., Augusta
Richard E. Barron, M.D., Monmouth
John D. Denison, M.D., Gardiner

Somerset County Medical Society
Delegates: John P. Dow, M.D., Pittsfield, Secretary
Richard P. Laney, M.D., Skowhegan
H. Carl Amrein, M.D., Madison

Alternates
Harland G. Turner, M.D., Norridgewock
Edgar J. Smith, M.D., Fairfield

Waldo County Medical Society
Delegates: Seth H. Read, M.D., Belfast, Secretary
Norman E. Cobb, M.D., Belfast

Alternate
George L. Temple, M.D., Belfast

FIFTH DISTRICT

Hancock County Medical Society
Delegates: Bradley E. Brownlow, M.D., Blue Hill, Secretary
Eliot T. Stadler, M.D., West Gouldsboro
Robert D. Wilson, M.D., Bar Harbor

Alternates
George G. Fuller, M.D., Ellsworth
Richard W. Britt, M.D., Blue Hill

Washington County Medical Society
Delegates: Karl V. Larson, M.D., East Machias, Secretary
James C. Bates, M.D., Eastport

Alternate
Robert G. MacBride, M.D., Lubec

SIXTH DISTRICT

Aroostook County Medical Society
Delegates: George J. Harrison, M.D., Houlton, Secretary
Melvin R. Aungst, M.D., Fort Kent
H. Douglas Collins, M.D., Caribou
Frank J. Twadelle, M.D., Gardiner

Alternates
Rodrigue J. Albert, M.D., Fort Kent
Frederick J. Gregory, M.D., Caribou
Harry M. Helfrich, Jr., M.D., Presque Isle

Penobscot County Medical Association
Delegates: William M. Shubert, M.D., Bangor, Secretary
Lloyd Brown, M.D., Bangor
Warren G. Strout, M.D., Bangor
Charles D. McEvoy, Jr., M.D., Bangor
Bourcard Nesin, M.D., Howland
John J. Pearson, M.D., Old Town

Alternates
Thornton W. Merriam, Jr., M.D., Bangor
Irvin E. Hamlin, M.D., E. Millinocket
Russell M. Lane, M.D., Orono
George O. Chase, M.D., Bangor
Leonard G. Miragliuolo, M.D., Bangor

Piscataquis County Medical Society
Delegates: Isaac Nelson, M.D., Greenville, Secretary
Charles H. Lightbody, M.D., Guilford

Alternate
John B. Curtis, M.D., Milo

Scientific and Special Exhibits

American Cancer Society, Maine Division, Inc.

Associated Hospital Service of Maine

Blood Transfusion Committee

Division of Cancer Control of the State of Maine Department of Health and Welfare

Division of Eye Care and Special Services of the State of Maine Department of Health and Welfare

Health Insurance Council

Maine Association of Medical Assistants

Maine Chapter, American Academy of General Practice

Maine Dairy Council

Maine Society of Clinical Hypnosis

Maine Heart Association, Inc.

Maine Society of Internal Medicine

Maine's Regional Medical Program

Maine Thoracic Society

New England Physicians Retirement Program

Northern New England Ostomy Club

Pernicious Anemia Detection Program, Eastern Maine General Hospital — "Pernicious Anemia Detection"

Pineland Hospital and Training Center

The National Foundation

Venereal Disease Control Section of the State of Maine Department of Health and Welfare

Vocational Rehabilitation Division of the State of Maine Department of Education

Technical Exhibits

Abbott Laboratories, North Chicago, Illinois

Accounting Forms Company, Inc., Accounting Systems Specialists, 142 High St., Rm. 430, Portland, Maine
Representatives: Mr. Robert E. O'Leary and Mr. Charles Ruben

The Alkalol Company, Taunton, Massachusetts
Representative: Mr. E. W. LeClair

Ayerst Laboratories, 685 Third Ave., New York, New York

Bicknell Photo Service, Inc., 24 Free St., Portland, Maine
Representative: Mr. David Dumas

Elmer N. Blackwell, Surgical Appliance Specialist, 565 Congress St., Rm. 207, Portland, Maine
Representatives: Mr. Elmer N. Blackwell and Mr. Oakley R. Sanborn

Bristol Laboratories, Syracuse, New York
Representative: Mr. R. Pogorelc

Burroughs Wellcome & Co. (U.S.A.) Inc., 1 Scarsdale Rd., Tuckahoe, New York
Representatives: Mr. L. F. Grillo, Mr. C. H. Hickman, Mr. P. T. Brady and Mr. E. J. Benoit

Ciba Pharmaceutical Company, Summit, New Jersey
Representative: Mr. John Angis

Endo Laboratories Inc., 1000 Stewart Ave., Garden City, New York
Representatives: Mr. John Winfield and Mr. David Green

Geo. C. Frye Co., 685 Congress St., Portland, Maine
Representatives: Mr. Douglas Cyr, Mr. Robert Cheney, Mr. Albert Messer, Mr. Sidney Cheney and Mr. David Babb

Geigy Pharmaceuticals, Ardsley, New York
Representatives: Mr. George Williams and Mr. Peter Wilkinson

Lederle Laboratories, Pearl River, New York
Representatives: Mr. R. Maffei, Mr. G. E. Pooler and Mr. J. Boucher

Maine Surgical Supply Co., 52 Marginal Way, Portland, Maine
Representatives: Mr. Robert Axelsen, Mr. Lawrence Gardiner, Mr. Robert Stokinger, Mr. George Munroe, Mr. Gerry Parker and Mr. Philip Dana, Jr.

Mallard Incorporated, 3021 Wabash Ave., Detroit, Michigan
Representative: Mr. Roland Stickney

McNeil Laboratories, Inc., Camp Hill Rd., Fort Washington, Pennsylvania
Representatives: Mr. Joseph A. Ruest, Jr. and Mr. John J. Barden

Mead Johnson Laboratories, Evansville, Indiana
Representatives: Mr. Remi St. Onge and Mr. Jim Bennett

Medical Plastics Laboratory, Inc., Gatesville, Texas
Representative: Mr. E. R. Goldman

Merck Sharp & Dohme, West Point, Pennsylvania
Representatives: Mr. Robert S. Baxendale and Mr. Joseph T. O'Sullivan

The Wm. S. Merrell Company, Cincinnati, Ohio
Representative: Mr. Joseph Crozier

The National Drug Company, 4663 Stenton Ave., Philadelphia, Pennsylvania
Representative: Mr. William Dunbar

Ortho Pharmaceutical Corporation, Raritan, New Jersey
Representative: Mr. A. Marshall Stewart

Parke, Davis & Company, Detroit, Michigan
Representatives: Mr. Merrill Dole and Mr. Gene Giroux

A. H. Robins Company, 1407 Cummings Dr., Richmond, Virginia
Representative: Mr. Hubert Strom

Roche Laboratories, Nutley, New Jersey
Representatives: Mr. Bill W. Lively and Mr. Carl S. Raphael

J. B. Roerig Division, 235 East 42nd St., New York, New York
Representatives: Mr. Max Couturier and Mr. Art Robertson

William H. Rorer, Inc., Fort Washington, Pennsylvania
Representatives: Mr. C. James Wilson, Mr. John T. Connerty, Jr., Mr. Alfred L. Vogler and Mr. Robert W. Roffler

Ross Laboratories, Columbus, Ohio
Representative: Mr. Harold Hutchinson

Sandoz Pharmaceuticals, Hanover, New Jersey
Representatives: Mr. L. Emidy and Mr. R. Trott

Schering Laboratories, 1011 Morris Ave., Union, New Jersey
Representatives: Mr. Jack Arlaud and Mr. Dale Selby

G. D. Searle & Co., P. O. Box 5110, Chicago, Illinois
Representatives: Mr. A. D. Zahniser, Mr. A. L. Grimes and Mr. J. J. Pash

Smith Kline & French Laboratories, 1500 Spring Garden St., Philadelphia, Pennsylvania
Representatives: Mr. Robert R. Phair and Mr. Carlisle W. Kelson

Smith, Miller & Patch, Inc., 902 Broadway, New York, New York
Representative: Mr. Leo Walsh

E. R. Squibb & Sons, Inc., 745 Fifth Ave., New York, New York
Representatives: Mr. Ernest Donagan and Mr. William Gray

Surgeons' and Physicians' Supply Co., 961 Commonwealth Ave., Boston, Massachusetts
Representatives: Mr. Charles S. Brittain, Mr. Irving Beers and Mr. John Stutz

Syntex Laboratories, Inc., Stanford Industrial Park, Palo Alto, California
Representatives: Mr. John Perroni and Mr. Louis Montefusco

The Upjohn Company, Kalamazoo, Michigan

Wallace Pharmaceuticals, Cranbury, New Jersey
Representatives: Mr. Arthur Jardine and Mr. James E. Poulin

Warner-Chilcott Laboratories, Morris Plains, New Jersey
Representatives: Mr. Richard S. Marr and Mr. Wayne L. Mowatt

Necrologies

Percy A. Leddy, M.D.

1895-1967

Percy A. Leddy, M.D., 72, of Seal Harbor, Maine died on August 9, 1967. He was born in Calais, Maine on August 7, 1895, son of John Eugene and Grace Rodgers Leddy.

Dr. Leddy graduated from the Massachusetts College of Pharmacy in 1917, the University of Maine in 1920 and received his medical degree from Harvard Medical School in 1924. He interned at the Boston City Hospital from 1924 to to 1926 and served a residency at the Thorndike Memorial Hospital from 1926 to 1927. Dr. Leddy was on the faculty of Yale Medical School from 1927 to 1945, and was on the staff of the University Hospital, New Haven, Connecticut and the Mt. Desert Hospital, Bar Harbor, Maine. He was college physician at the University of Maine in Orono for several years and was located in Seal Harbor, Maine at the time of his death.

He was a member of the Penobscot County Medical Association, the Maine Medical Association and the American Medical Association.

Surviving is his widow, the former Rose Gunning.

Edson B. Buker, M.D.

1882-1968

Edson B. Buker, M.D., 85, of Auburn, Maine died on January 28, 1968. He was born in Presque Isle, Maine on November 1, 1882, son of George H. and Nellie L. Buker.

Dr. Buker graduated from the University of Maine in 1904 and received his medical degree from Bowdoin Medical School in 1908. After serving his internship at the Worcester City Hospital in Massachusetts, Dr. Buker began his practice in Auburn in 1911, practicing there until his retirement in 1952.

He was an Honorary member of the Androscoggin County Medical Society and the Maine Medical Association, having received a 50-year pin in 1958, a 55-year pin in 1963, and would have received his 60-year pin this year at the annual session in June. Dr. Buker was also a member of the American Medical Association, had served on the surgical staff of the Central Maine General Hospital from 1920 to 1946, as Pathologist from 1916 to 1925 and as Adjunct X-ray Operator from 1919 to 1926.

Surviving are his widow, the former Emma Maude Ross; a son, George of Hebron, Maine; a daughter, Mrs. Gregory Rochlin of Cambridge, Massachusetts; eight grandchildren and three great-grandchildren.

Morris E. Goldman, M.D.

1903-1968

The Androscoggin County Medical Society and these communities were shocked to learn of the sudden death of Dr. Morris E. Goldman on February 8, 1968.

Dr. Goldman was born in Boston, December 29, 1903. He was a graduate of Tufts University and received his medical degree from Tufts University Medical School in 1928.

Dr. Goldman interned at the Central Maine General Hospital in 1928-29. He was assistant surgeon from 1931 to 1943. Orthopedic surgery interested him, and he was appointed house officer of the Bone and Joint Service at the Boston City Hospital during 1943-44. Following this, he was appointed orthopedic surgeon at the Central Maine General Hospital and was chief of the Central Maine General Hospital Orthopedic Service at one time. Dr. Goldman was active on the service until his death. He operated on a patient the day of his death.

Dr. Goldman was very active all his life in the progress of medicine and attended many meetings of numerous medical organizations throughout the country. He was a Fellow of the International College of Surgeons, a member of the American College of Surgeons, and past president of the Androscoggin County Medical Society, and a member of the Maine Medical Association. Dr. Goldman was also a member of the American Medical Association. He demonstrated the treatment of fractures at the American Medical Association in Atlantic City in 1949 and again in Washington, D.C., at the clinical session of the American Medical Association in 1949.

Dr. Goldman was a member of the Jewish Community Center, the Beth Jacob Synagogue, and Rabboni Lodge of Masons. He was also a thirty-second degree Mason and a member of Kora Temple Shrine.

Outside of his profession, Dr. Goldman's first thoughts and interests were his home and family, to which he was most devoted. He had few hobbies if any, and evidently his chief pleasure in life was his professional work. He took few vacations as such. However, in 1963 as a diversification from routine, he and Mrs. Goldman enjoyed a wonderful trip to Honolulu, Japan, Australia, and Thailand, for a period of 2½ months. This was in conjunction with the Pan-Pacific Surgical Association of which he was a member. Life has its joys and its tragedies for Dr. Goldman and his family. In 1964, his son, a member of the Central Maine General Hospital Surgical Staff, died very suddenly. He was a most promising young surgeon. This was indeed a severe source of grief for the doctor and his family.

Dr. Goldman was most highly regarded by his colleagues for his integrity and his sound professional judgment. He enjoyed an extensive practice and his passing will be a deep loss to the profession and to his many patients and friends.

In consideration of these many fine attributes, Be it Resolved

That the Androscoggin County Medical Society wishes to express its profound sorrow at the loss of a past president and a distinguished member.

That the Society extend to the family of Dr. Goldman its deepest sympathy in their bereavement.

That this resolution be filed with the records of this organization and a copy be sent to the family of Dr. Goldman.

Signed, The Committee on Resolutions
E. N. Giguere, M.D.
R. A. Goodwin, Sr., M.D.

George B. O'Connell, Jr., M.D.

1917-1968

Dr. George B. O'Connell, Jr. was born the son of Dr. George B. O'Connell, Sr. on August 30th, 1917. He graduated from Lewiston High School in 1934, from Bates College four years later and from the University of Vermont Medical School in 1942. His internship was at St. Francis Hospital of Hartford, Connecticut.

He served in World War II in the Army with the rank of Major. After his discharge, he established himself here in general practice until 1956 when he became a resident physician

at the Manhattan Eye, Ear, Nose and Throat Hospital in New York City, and returned here in 1959 specializing in ear, nose and throat medicine.

Dr. George B. O'Connell, Jr. on February 20, 1968 died at St. Mary's General Hospital at the age of 50 years.

WHEREAS that in the death of George B. O'Connell, the Androscoggin County Medical Association has lost a member of professional worth, and

WHEREAS his kindly personality, his brilliant mind, his ability in the special branch of the medical art were highly regarded by us all, therefore be it

RESOLVED that we extend to his family our most sincere sympathy and be it further

RESOLVED that this resolution be made a part of the records of this meeting.

E. N. Giguere, M.D.
R. A. Goodwin, Sr., M.D.

Harold M. Frost, M.D.

1888-1968

Harold M. Frost, M.D., 79, of Friendship, Maine died on March 2, 1968. He was born in Bowdoinham, Maine on March 25, 1888, son of John Maurice and Janette Dunlap Frost.

Dr. Frost graduated from Brown University in 1909 and received his medical degree from Harvard Medical School in 1915. He served his internship at the Massachusetts General Hospital and a residency in surgery at the Boston City Hospital. He served in the U.S. Army Medical Corps as Captain from 1917 to 1919.

Dr. Frost joined New England Mutual Life Insurance Company in 1921 and served as the company's medical director from 1931 until 1954 when he retired to Friendship, Maine. He came out of retirement when he found that Friendship had been without a regular doctor for two years. By 1956, Dr. Frost had established a full-time practice. Last August, the town's 800 residents turned out to honor him after he found it necessary to retire because of failing health. The townspeople, along with New England Life, established a "Dr. Frost Recognition Fund" which is being used to staff a dispensary at Knox Hospital in Rockland.

He was an Honorary member of the Knox County Medical Society and the Maine Medical Association, having received a 50-year pin in 1965. Dr. Frost was also a member of the American Medical Association, an assistant superintendent of the Massachusetts Eye and Ear Infirmary, chief surgeon of the Boston and Albany Railroad, a founder and chairman of the Board of Life Insurance Medicine, a trustee of the New England Baptist Hospital, and was on the staff of the Massachusetts General Hospital and the Knox County General Hospital.

Surviving are his widow, Mrs. Lucy Church Frost; two sons, Richard J. of New Orleans, Louisiana and Dr. Harold M., Jr. of Detroit, Michigan; five grandchildren and a cousin, Mrs. Irene Macy of Boothbay.

Harry F. Morin, M.D.

1880-1968

Harry F. Morin, M.D., 87, of Bath, Maine died on April 9, 1968. He was born in Embden, Maine on August 1, 1880, son of John Williams and Celestia Redmond Morin.

Dr. Morin graduated from Anson Academy in Anson, Maine in 1898 and received his medical degree from the Boston University School of Medicine in 1904. He located in Massachusetts where he became assistant of the Massachusetts Memorial Hospital. In 1909 he moved to Bath and entered private practice and was active there until his retirement in 1956, after 52 years.

Dr. Morin was an Honorary member of the Lincoln-Sagadahoc County Medical Society and the Maine Medical Association, having received a 50-year pin in 1954, a 55-year pin in 1959 and a 60-year pin in 1964. He was also a member of the American Medical Association, the New England Roentgen Ray Society, the American Institute of Homeopathy, a fellow of the International College of Surgeons and had served as medical examiner for Sagadahoc County from 1914 to 1940. Dr. Morin had served on the staff of the Bath Memorial Hospital, the Central Maine General Hospital in Lewiston, the Parkview and Regional Hospitals in Brunswick, and was active on the board of directors of the Bath YMCA.

Surviving are his widow, Mrs. Mabelle Whitten Morin; a son, Edward G. of Chatham, New Jersey; a daughter, Mrs. Constance M. Donovan of West Hartford, Connecticut; eight grandchildren; two nieces and a nephew.

Francis A. Fagone, M.D.

1899-1968

Francis A. Fagone, M.D., 69, of Portland, Maine died on April 18, 1968. He was born in Mineo, Italy on January 1, 1899, son of Agrippino and Josephine Fagone.

Dr. Fagone graduated from Portland High School in 1918, attended Bowdoin College and received his medical degree from Tufts University School of Medicine in 1924. He interned at the Maine General Hospital and had practiced medicine in Portland for over forty years.

Dr. Fagone had served in World Wars I and II and retired with the rank of Colonel in the Medical Corps in 1946. He was a member of the First Medical Division and from 1941 to 1943 was division medical inspector at Fort Devens, Massachusetts. He commanded the 145th Station Hospital at Fort Dix, New Jersey and was commanding officer of the 198th Station Hospital in Docca, India, where he was honored for meritorious service.

He was a member of the Cumberland County Medical Society, the Maine Medical Association, the American Medical Association, the Maine Society of Obstetrics and Gynecology, the New England Gynecological and Obstetrics Society and a charter member and past president of the American Academy of General Practitioners. Dr. Fagone was also appointed by several governors as county medical examiner, served as assistant city physician for many years and as the physician for the Maine Boxing Commission.

Surviving are his widow, the former Helen Bacon; two sons, Albert F. of Dayton, Ohio and Francis A., Jr. of Portland; a daughter, Mrs. Norman H. Olsen of Cape Elizabeth; five grandchildren and a great grandson.

Lloyd W. Bishop, M.D.

1902-1968

Lloyd W. Bishop, M.D., 65, of Portland, Maine died on April 26, 1968. He was born in Paris Hill, Maine on August 19, 1902, son of the Reverend Harvey H. and Agnes Powers Bishop.

Dr. Bishop graduated from Bowdoin College in 1923 and received his medical degree from Harvard Medical School in

1927. He interned at the Montreal General Hospital and then practiced in South Portland for one year before locating in Portland in 1930 where he specialized in children's diseases.

He was a member of the Cumberland County Medical Society, the Maine Medical Association, the American Medical Association and the New England Pediatrics Association. Dr. Bishop was affiliated with the old Children's Hospital in Portland, was on the consulting staff of the Maine Medical Center and Mercy Hospital and was active on the Polio Commission and in polio clinics. He was a founder of the South Portland Public Health Association and St. Luke's Well Baby Clinic and had served on the South Portland Gardens Well Baby Clinic.

Surviving are his widow, the former Marjorie Orman; a son, Dr. Lloyd O. Bishop, Wilmington, North Carolina; two grandchildren, Lloyd W. Bishop, II and Julia Norris Bishop; two brothers, Professor Harvey Bishop, Newton, Massachusetts and Francis O. Bishop, Wellesley, Massachusetts; and three nephews.

In Memoriam

Androscoggin County

Edson B. Buker, M.D.	Auburn
Frederick L. Chenery, Jr., M.D.	Monmouth
Morris E. Goldman, M.D.	Lewiston
George B. O'Connell, M.D.	Lewiston

Cumberland County

Nathaniel B. T. Barker, M.D.	Yarmouth
Lloyd W. Bishop, M.D.	Portland
William C. Burrage, M.D.	Portland
Francis A. Fagone, M.D.	Portland
William R. McAdams, M.D.	Portland
J. Foster Wellington, M.D.	Portland

Franklin County

George L. Pratt, M.D.	Fairfield

Kennebec County

William D. McLarn, M.D.	Waterville
Pierre E. Provost, M.D.	Augusta
William N. Runyon, M.D.	Togus
Stephen W. Sanders, M.D.	Winthrop

Knox County

Harold M. Frost, M.D.	Friendship

Lincoln-Sagadahoc County

Harry F. Morin, M.D.	Bath
Rufus E. Stetson, M.D.	Damariscotta

Oxford County

Edwin Kay, M.D.	Lewiston

Penobscot County

Percy A. Leddy, M.D.	Seal Harbor
Donald F. Macdonald, M.D.	Brewer
Cecil J. Metcalf, M.D.	Cambridge, Massachusetts
Harold A. Pooler, M.D.	Bangor
Carl W. Ruhlin, M.D.	Bangor
John R. Sullivan, M.D.	Brewer
George B. Weatherbee, M.D.	Hampden Highlands

Washington County

Leslie W. Brownrigg, M.D.	St. Stephen, N.B., Canada

County Society Notes

KENNEBEC

The Kennebec County Medical Association met on February 15, 1968 at the Holiday Inn in Augusta, Maine. Following the social hour and an excellent dinner, the business meeting was called to order by the President, Richard H. Dennis, M.D.

Peter J. Leadley, M.D. of the Division of Communicable Diseases, State Department of Health, Augusta, Maine was elected to membership.

Dr. Dennis announced that the March meeting of the Association would be a Joint Meeting with the Maine Thoracic Society and that Myron Stein, M.D., Director of the Pulmonary Service, Rhode Island Hospital would speak on Pulmonary Embolism.

Following the business meeting, Dr. Dennis introduced Stanley E. Herrick, M.D. of Damariscotta whose subject was, Is Cancer Chemotherapy Worthwhile? Dr. Herrick's talk was most interesting and informative and led to a lively question and answer period.

A meeting of the Kennebec County Medical Association was held at the Holiday Inn in Augusta, Maine on March 22, 1968, and was a Joint Meeting with the Maine Thoracic Society. Following a pleasant social hour and dinner, Lloyd Brown, M.D., President of the Maine Thoracic Society introduced Marion K. Moulton, M.D. of West Newfield who is President of the Maine Tuberculosis Association.

Following adjournment of a business meeting of the Kennebec County Medical Association and the Maine Thoracic Society, Dr. Brown introduced the speaker of the evening, Myron Stein, M.D., Associate Professor of Medicine, Brown University and Physician-in-Charge, Pulmonary Division, Rhode Island Hospital, Providence, Rhode Island and co-author of the Symposium-Pulmonary Embolic Disease. Dr. Stein presented a fascinating discussion on problems presented by pulmonary embolic disease. Sixty members and guests were in attendance and participated in a most worthwhile clinical discussion.

FRANCIS A. SPELLMAN, M.D., *Secretary*

CUMBERLAND

The Cumberland County Medical Society meeting was held at Valle's Steak House in Portland, Maine on March 21, 1968 with eighty-six members and guests attending. Following a social hour and dinner, the President, Eugene P. McManamy, M.D. read a letter from Clement A. Hiebert, M.D. encouraging members of the Society to label all prescriptions with the name of the drug. Considerable discussion followed of the pros and cons of the matter, but finally a motion was passed favoring the labeling of prescribed medications followed by a second motion to send a letter to the Maine Pharmaceutical Association asking that their members honor instructions to label a prescription with the name of the drug when so instructed.

Charles R. Glassmire, M.D. reported on his recent trip to Washington to attend a meeting of AMPAC. He pointed out that there are multiple committees from both Houses of Congress to investigate increasing medical costs while supporting and encouraging an inflationary trend both in government and in society in general. Dr. Glassmire urged that each member join MEMPAC. Dr. Glassmire also encouraged each of the delegates and alternates to attend the interim meeting of the House of Delegates on April 7, 1968. The remainder of the program was devoted to the Keogh Bill.

Ferris S. Ray, M.D., Program Chairman, introduced Mr. Jotham Pierce who served as moderator and who described the background and development of the Self-Employment Tax Retirement Act of 1965. Mr. Pierce, in turn, introduced Mr. Joseph T. Gough who presented data on contributions, tax consequences, and use of mutual funds as a funding medium. He was followed by Theodore Warner who discussed the benefits from utilization of a Keogh Bill Plan and the advantages of a trusteed plan. Mr. William Daley discussed funding of a Keogh Bill through an insurance company. A great deal of data was presented, and many questions were asked to clarify obscure points in this complicated matter.

The ultimate result of the evening's program was stimulation of much interest in many of the members of investigating the possibilities of participation in a Keogh Program.

STANLEY B. SYLVESTER, M.D., *Secretary*

WASHINGTON

A meeting of the Washington County Medical Society was held on March 25, 1968 at the Dennys River Inn, Dennysville, Maine with eight members present.

There was considerable discussion on attempts to obtain a pathologist for the County to act as Medical Examiner as well as pathologist for the three hospitals of the County. It was felt that until a pathologist was available that the physicians in the County should attempt to raise their autopsy level by doing autopsies on as many of their own patients as possible to ascertain the cause of death. It was felt that a charge of twenty-five dollars ($25.00) should be charged for this. Additions to this minimum fee would be made, depending on time involved.

There was also a discussion on the Maternal and Infant Care Program. Apparently some progress has been made in evaluating the two programs put out: one by Dr. Russell of Castine and one by the Department of Health and Welfare. In the near future a meeting will be held to evaluate the two programs and it is hoped to have a common meeting ground. The eventual program should be acceptable, both to the doctors and to the Department of Health and Welfare.

KARL V. LARSON, M.D., *Secretary*

HANCOCK

The Hancock County Medical Society meeting was held at the Mary Jane Restaurant in Bar Harbor, Maine on April 10, 1968 with seventeen members and two guests present.

There was a discussion of the report of Eliot T. Stadler, M.D., delegate for the Interim Meeting of the House of Delegates in Brunswick on April 7, 1968. The budget was discussed extensively.

It was moved by Charles H. Knickerbocker, M.D. that the County Society recommend that the Maine Medical Journal discontinue its publication and that the Maine Medical Association explore the possibility of allocating a lesser portion of the budget item for publishing to another New England area Medical Journal. This was seconded by Winston G. Stewart, M.D. and was adopted by the Society. The redundancy and ever-rising expense of the Maine Journal were the objections to it. It was realized that some published outlet is needed for the Association's announcements and pronouncements.

Mention was made of a meeting with Dr. Thompkins of the Children's Bureau in Washington concerning the Maternal and Infant Care Project in Hancock and Washington County on April 2, 1968. The Augusta meeting was attended by Dr. James C. Bates of Washington County, and Drs. Robert F. Russell, Bradley E. Brownlow, John D. McIntyre and Morris A. Lambdin of Hancock County. The revised version of the MIC Program adopted by the Hancock County Medical Society in

February is to be rewritten in a form that will be more acceptable to Dr. Thompkins' Bureau. Hopefully this will be accomplished before the June House of Delegates meeting.

The speaker of the evening was Mr. David R. Schropp, Account Executive of Merrill, Lynch, Pierce, Fenner & Smith Inc. Mr. Schropp gave an enlightening discussion of the Nation's financial problems and of the various vehicles for investment.

BRADLEY E. BROWNLOW, M.D., *Secretary*

ANDROSCOGGIN

A meeting of the Androscoggin County Medical Association was held at the Central Maine General Hospital in Lewiston, Maine on March 21, 1968 with sixteen members present.

The meeting was called to order by the President, Joseph J. Rando, M.D.

Notes of appreciation from the families of Drs. Edson B. Buker and Morris E. Goldman were acknowledged. Resolutions were read on the deaths of Drs. Morris E. Goldman and George B. O'Connell and it was voted to send copies to the families and to the Maine Medical Association.

It was voted that the April meeting with Kennebec County Medical Association be a dinner meeting on the third Thursday. Arrangements are to be formulated by John W. Carrier, M.D. The May meeting will be held on a Sunday at Lost Valley with Dr. Carrier to ascertain when space is available.

The possibility of the Maine Medical Association administering its own malpractice insurance program was introduced by Thomas F. Shields, M.D. who also made a motion that the Association go on record endorsing fluoridation of the water supply.

Paul S. Hill, Jr., M.D., President of the Maine Medical Association, was introduced. His remarks concerning insurance programs and other matters of interest to the members were followed by a question and answer period.

DONALD L. ANDERSON, M.D., *Secretary*

News, Notes and Announcements

Symposium
Recent Advances in Immunology as Related to Rheumatoid and Central Nervous System Diseases

Augusta General Hospital
June 1, 1968 — 9:30-12:30
Francis J. O'Connor, M.D.
Program Chairman

Olrich J. Kolar, M.D., Ph.D., Czechoslovakia, Visiting Professor at University of Indiana
Robert F. Ritchie, M.D., Maine Medical Center, Portland, Maine
Julius W. Ciembroniewicz, M.D., Neurosurgeon, Augusta General Hospital, Augusta, Maine

Public Health at Berkeley Announces Postgraduate Programs Available

The Division of Maternal and Child Health of the University of California School of Public Health at Berkeley announces the following postgraduate programs for pediatricians, obstetricians, and other physicians interested in receiving training in the field of Maternal and Child Health. These programs all lead to the degree of Master of Public Health. Tax-exempt fellowship support is available.

Maternal and Child Health. A 9-month program in planning, organizing, and operating comprehensive health services for mothers and children.

Family Planning. A 9-month academic program providing intensive work in family planning as part of the general graduate preparation of maternal and child health specialists.

School Health. A 9-month academic program providing intensive work in school health as part of the general graduate preparation of maternal and child health specialists.

The Multiple Handicapped and Mentally Retarded Child. A 21-month academic and clinical program in planning, organizing, and operating community services for children with multiple handicaps, including mental retardation. This program is primarily for Board-certified or Board-eligible pediatricians, or for physicians on the staff of institutions for the mentally retarded or handicapped children.

Career Development Programs. Three-year academic and residency programs consisting of one year of academic training leading to the degree of Master of Public Health combined with residency training in Pediatrics or Obstetrics-Gynecology. The training emphasizes planning, organization and operation of comprehensive health programs.

Applications are now being accepted for the group entering in July or September 1969. For information write to Helen M. Wallace, M.D., School of Public Health, University of California, Berkeley, California 94720.

Portland Physician Elected to American College of Physicians Board of Governors

Dr. Albert Aranson, Chief of the Department of Internal Medicine at the Maine Medical Center in Portland, Maine, was elected to a one-year term on the American College of Physicians Board of Governors. Dr. Aranson will fill the unexpired term of the late William C. Burrage, M.D.

The election took place during the business meeting of the Colleges 49th Annual Session at the Sheraton-Boston Hotel and War Memorial Auditorium.

Augusta Doctor Heads Boston Orthopedic Club

An Augusta physician, Dr. Allan J. Stinchfield, is the new president of the Boston Orthopedic Club, a 71-year-old organization of doctors working in the field of the bones and joints.

Dr. Stinchfield was installed on April 15th in Boston after a meeting of the New England Region of the American Academy of Orthopedic Surgeons.

The academy's regional meeting discussed the work of newly formed committees to advise state health and welfare departments on better use of Medicare and Medicaid. The committees are seeking ways of improving the care of children and adults with congenital defects, injuries, broken bones or arthritis.

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Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals.
Contraindications: History of hypersensitivity to any component.
Warning: If renal impairment exists, even usual doses may lead to liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Hypersensitive individuals may develop a photodynamic reaction to natural or artificial sunlight during use. Individuals with a history of photosensitivity reactions should avoid direct exposure while under treatment, which should be discontinued at first evidence of skin discomfort.
Precautions: Some individuals may experience drowsiness, anorexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development may cause discoloration of teeth.
Adverse Reactions: Gastrointestinal—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity; onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels following full therapeutic dosage has been reported. This has disappeared rapidly when drug was discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy and in children given the drug during the neonatal period, infancy, and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Lederle

327-8



Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of Tofrānil and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before Tofrānil may be substituted. Initial Tofrānil dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when Tofrānil was added to the regimen.
Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 years of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, disturbances of accommodation, sweating, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and disorientation), activation of psychosis in schizophrenics and agitation (includ-

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The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated.

In patients with cardiovascular disease, hyperthyroidism or increased intraocular pressure; or in those receiving anticholinergics (including antiparkinsonism agents), thyroid medication, or antihypertensive adrenergic neuron-blocking agents; and in those in their first trimester of pregnancy, the special precautions listed in the prescribing information should be carefully observed.

Toxic reactions severe enough to require discontinuation of Tofrānil are uncommon. However, for complete details, please refer to the full prescribing information.

Tofrānil® imipramine hydrochloride
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ypomanic and manic episodes) may require dosage reduction or addition of a tranquilizer or porary discontinuation of the drug, otiform seizures, orthostatic pension and substantial blood ure fall in hypertensive patients, ra, transient jaundice, bone marepression including agranulocysensitization and skin rash ding photosensitization, eosino-, and mild withdrawal symptoms dden discontinuation after pro- treatment with high doses. sional hormonal effects (imice, decreased libido, and estro- effects) may be observed. ine-like effects may be more unced (e.g. paralytic ileus) in ptible patients and in those anticholinergic agents (includtiparkinsonism drugs).
tient Adult Dosage: Initially, . daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
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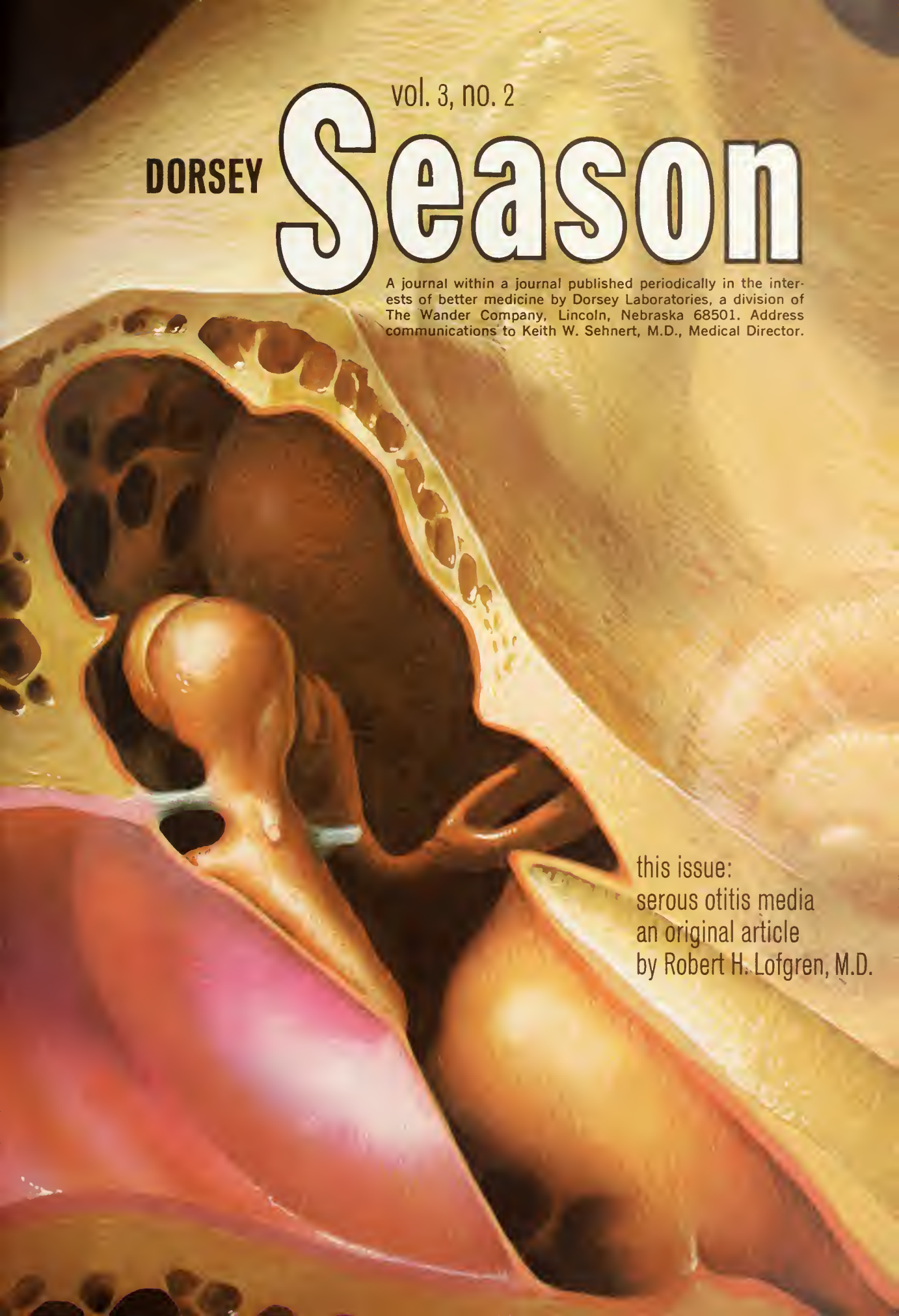
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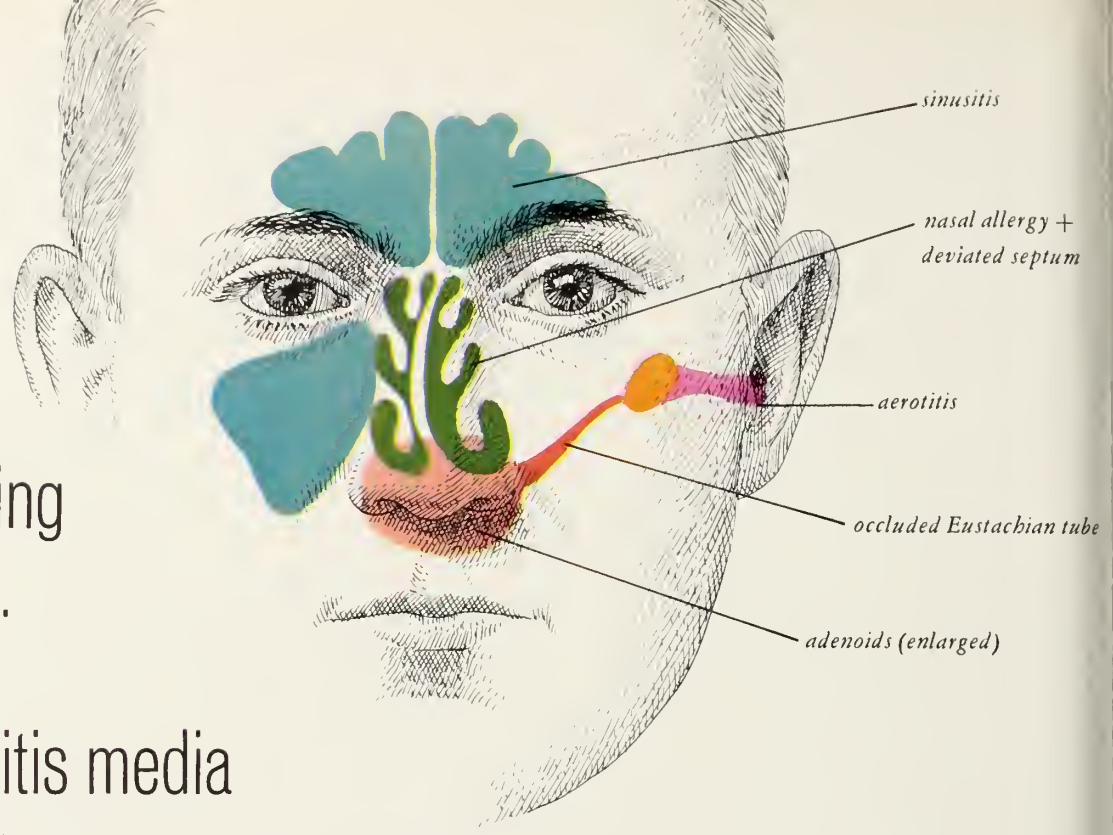
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this issue:
serous otitis media
an original article
by Robert H. Lofgren, M.D.



the complaining earache... key to serous otitis media

Robert H. Lofgren, M.D.
Associate Surgeon, Massachusetts Eye and Ear Infirmary, Boston, Massachusetts

Serous otitis media is probably the most common ear problem in children, especially in the wintertime. Diagnosis is usually easy in adults, but may be quite difficult in children, especially the very young child where one has to depend almost entirely on the physical findings.

The symptoms of serous otitis are a fullness in the ear, a mild hearing loss and mild earache. The earache can best be described as a "complaining earache" instead of a "screaming earache" as found in purulent otitis media. A young child may be irritable and pull at the ear. In milder cases, and as the ear recovers, gurgling and popping noises can be heard in the ear.

On examination one may see a yellow tympanic membrane and if a fluid level is present the diagnosis becomes easy. However, the eardrum may be dull gray, or slightly pink, or even perfectly normal. Pneumomassage using a Siegle otoscope or a closed-head electric otoscope must be done on both ears, otherwise the diagnosis will be frequently missed. Attempted movement of the drum with the pneumatic otoscope produces either a sluggish motion of the drum or no motion at all instead of the easily movable normal drum. The Rinne test is negative and there is a 15-20 decibel conductive hearing loss. The bone conduction may be better than normal and an air-bone gap may exist even with the air conduction within normal limits. Occasionally one finds a false nerve deafness on the audiogram when thick glue-like fluid causes immobility of both the oval and round window. Both conditions return to normal when the fluid is removed, but they make the interpretation of screening audiograms very difficult.

There is no single cause for serous otitis. One factor always present is blockage of the eustachian tube, but this alone is not enough to produce fluid. There must also be an inflammatory reaction. Blockage of the eustachian tube may be caused by many conditions. In children the most common cause is enlarged adenoids. In the summer the next most common cause is allergy. Upper respiratory infections or influenza are common causes in the winter. Nasal allergy, acute and chronic sinusitis, nasal septal deformity and cleft palate can all cause eustachian tube obstruction. Some children may have a congenitally small eustachian tube, but fortunately they usually "grow out of the problem."

The first sign of a nasopharyngeal tumor is often a serous otitis. One must always rule this out in any adult who later in life develops repeated or persisting serous otitis. Causes sometimes overlooked are nasogastric tubes after surgery, simple obesity and cardiorenal disease, which may produce congestion in the mucosal lining of the eustachian tube. In recent years we have been seeing a new cause—acute otitis media, where the patient is adequately treated with antibiotics but where drainage has not been

established either through the eardrum or down the eustachian tube. A sterile exudate is left in the middle ear.

The inflammatory response may be caused by a marked negative pressure as in air otitis from flying, or it may be from a mild bacterial or viral infection in the middle ear. Serous fluid is a good culture medium and will frequently go on to purulent otitis media, especially if the original blockage was caused by an infectious process such as acute rhinitis or adenoiditis. When the infection heals there may be scarring in the middle ear mucosa. Mucous glands develop in this tissue and pour out a thick mucoid material. This ear usually looks normal until a pneumatic otoscope is used. The objectives in treating serous otitis are to remove the obstructing agent and to provide drainage from the middle ear. Often this can be accomplished by decongestants and nose drops. If large obstructing adenoids are present they should be removed. Sinusitis should be treated with oral decongestants or nose drops, plus antibiotics where indicated. Nasopharyngeal tumors should be treated. Allergies should be treated with antihistamines and, where indicated, by desensitization.

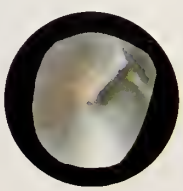
If the fluid does not clear with medical treatment within a week or two, a myringotomy should be done. If there is a question of active infection or if the fluid looks purulent, as is seen at the conclusion of acute otitis, cultures are taken. On adults this can be done in the office without anesthesia. It is no more painful than an intravenous needle for a blood test. A good safe topical anesthetic has a tremendous psychological value to the patient. Children under the age of 1 require no anesthesia. Between the ages of 1 and 3 anesthesia is not absolutely essential although a general anesthetic may be used to avoid the child's possible mistrust at follow-up examinations. I usually do the myringotomy at the same time as the adenoidectomy if the adenoids are enlarged. Once drainage has been established with decongestants or by myringotomy, positive pressure inflation of the middle ear is invaluable in forcing out the serous fluid and keeping it from reforming. The patient can do this himself by performing the Valsalva maneuver. This should be done several times a day, by taking a deep breath, holding the nose and blowing hard against the closed lips for a second or two.

In resistant cases where the fluid reforms as soon as the myringotomy heals, small polyethylene tubes are inserted through the myringotomy site. Insertion of the tubes, even in adults, usually requires an anesthetic. Good anesthesia can be obtained by infiltrating the canal wall with a local anesthetic, using a #27 needle. Once inserted the patient has no sensation of the tubes' presence. Be careful to caution the patient or parents not to allow any water to get into the ear canal while a myringotomy is open or a tube is in place. Water can be kept out by a pledget of lamb's wool in the ear canal or a cotton pledget thickly coated on the outside with petroleum jelly. I check these patients a week after a myringotomy to be sure it is healed and at two month intervals until the tubes have fallen out, usually within three to six months after insertion.

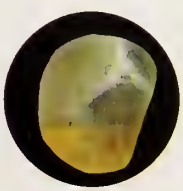
The mucoid type of fluid is so thick and tenacious that it is appropriately called a glue ear. It is aspirated only with difficulty through the eardrum, and occasionally must be removed through a tympanotomy. This thick, glue-like fluid is prone to recur, as the myringotomy usually heals long before the mucous membrane has returned to normal. Repeated myringotomies, as many as ten or twenty, were formerly required for this condition. Now polyethylene tubes are inserted initially when this thick, glue-like material is found. At times a subacute mastoiditis may accompany the serous otitis, which will necessitate a simple mastoidectomy before the condition can be eradicated. Usually the thin serous fluid readily responds to decongestants or to a myringotomy and removal of the eustachian tube obstruction. Occasionally, however, even serous fluid will repeatedly reform. For this, resection of the tympanic plexus of nerves which lies on the promontory of the middle ear has been carried out, as the tympanic branch of the glossopharyngeal nerve is the secretomotor nerve to the ear.

Failure to diagnose serous otitis is the most common cause of the recurrent, almost continuous otitis me-

Otoscopic Views



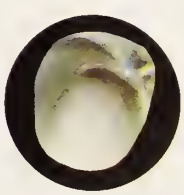
Normal



Acute Serous



Acute Purulent



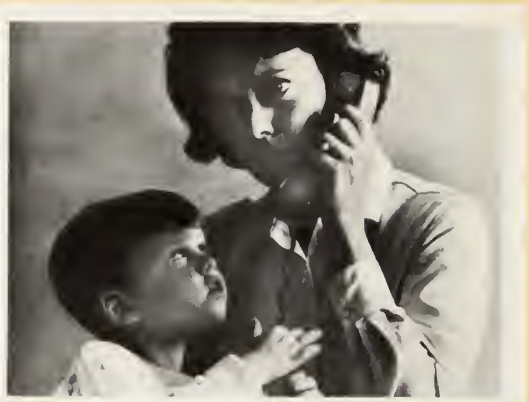
Chronic Serous

dia seen in young children. In these cases a myringotomy will frequently provide a long-term cure without adenoidectomy or any other surgery. Failure to do this may allow the condition to go on to acute or subacute mastoiditis. Adhesive otitis media with scar tissue binding down the ossicles or tympanosclerosis may also result with permanent impairment of hearing. The prognosis for hearing with adhesive otitis or tympanosclerosis is usually poor. If the adhesions are removed, they reform, and the same is frequently true of tympanosclerosis even after a tympanoplasty. For many of these people a hearing aid is the only solution. The constant negative pressure in long standing serous otitis media may draw in either Schrapnell's membrane or the posterior superior portion of the eardrum forming a pocket to cause a chronic otitis media with cholesteatoma, which may not become apparent until twenty or thirty years later.

The non-medical complications of improper diagnosis or treatment may be even more serious. The irritable child, the frequent bouts of acute purulent otitis media with pain and fever, the expense of antibiotics and doctors, and the time lost from school or work affect the entire family.

In summary, serous otitis has many causes. There is a blocking of the eustachian tube and an inflammatory reaction in the middle ear mucosa, the latter usually caused by a mild infection. The treatment is to provide immediate drainage by decongestants and where necessary, by a myringotomy. The obstructing agent must be removed by surgery if it is adenoid or by oral decongestants, and antihistamines or nasal spray if it is an upper respiratory infection or allergy. Occasionally resistant cases require plastic tubes placed through the eardrum or other more radical surgery. Failure to treat properly leads to hearing loss which may be permanent, repeated acute otitis media or possibly even chronic otitis media with cholesteatoma.

References 1. Senturia, B. H. et al.; Middle Ear Effusions: Pathologic Changes of the Mucoperiosteum in the Experimental Animal, Ann. Otol. 71:632-648, 1962. 2. Grahne, B.; Serous Otitis Media, Acta Oto-Laryng. 58:1-8, 1964. 3. Sade, J.; Pathology and Pathogenesis of Serous Otitis Media, Arch. Otolaryng, 84:297-305, 1966. 4. Buckingham, R. A. and Ferrer, J. L.; Reversibility of Chronic Adhesive Otitis Media with Polyethylene Tubes, Laryngoscope 76:993-1014, 1966. 5. Chalat, N. I. and Lounsbury, E.; A Hearing Phenomenon and Serous Otitis, Laryngoscope 76:983-992, 1966. 6. Shucknecht, H. F.; Chronic Otitis Media in Children: A New Treatment, Clin. Pediat. 3:718-727, 1964. 7. Feuerstein, S. S.; Surgery in Serous Otitis Media, Laryngoscope 76:686-708, 1966. 8. Kapur, Y. P.; Serous Otitis Media in Children, Arch. Otolaryng. 79:38-48, 1964. 9. Silverstein, H., Miller, G. F., Jr. and Lindemman, R. C.; Eustachian Tube Dysfunction as a Cause for Chronic Secretory Otitis in Children, Laryngoscope 76:259-273, 1966.



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Synalar Solution produces rapid antiinflammatory, antipruritic action through its unique topical corticosteroid, fluocinolone acetonide. The propylene glycol vehicle provides additional benefits for therapy at problem sites where it is difficult to achieve contact between the lesion and medication—or where creams or ointments may make the lesions worse. Synalar Solution has proved particularly valuable in the symptomatic treatment of seborrheic dermatitis of the scalp, nasolabial folds, eyebrows, ears, and in flexural folds such as the axillae, inframammary, umbilical and anocrural areas. It has also been reported to achieve excellent results in the adjunctive management of atopic dermatitis, contact dermatitis, neurodermatitis, nummular eczema, psoriasis, and sweat retention syndromes in these problem sites.

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Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components.

Precautions: In some patients with dry lesions, the solution may increase dryness, scaling, or itching. Application to denuded or fissured areas, such as genital or perianal sites, may produce a burning or stinging sensation. If this persists and dermatitis does not improve, discontinue medication. Although propylene glycol has antiseptic activity, there should be careful initial evaluation and follow-up of infected sites. Incomplete response or exacerbation of lesions may be due to true infection, which requires susceptibility testing and appropriate therapy. On the other hand, saprophytic or low grade infections may clear spontaneously under the influence of Synalar Solution alone. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

Side Effects: Side effects are not encountered ordinarily with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

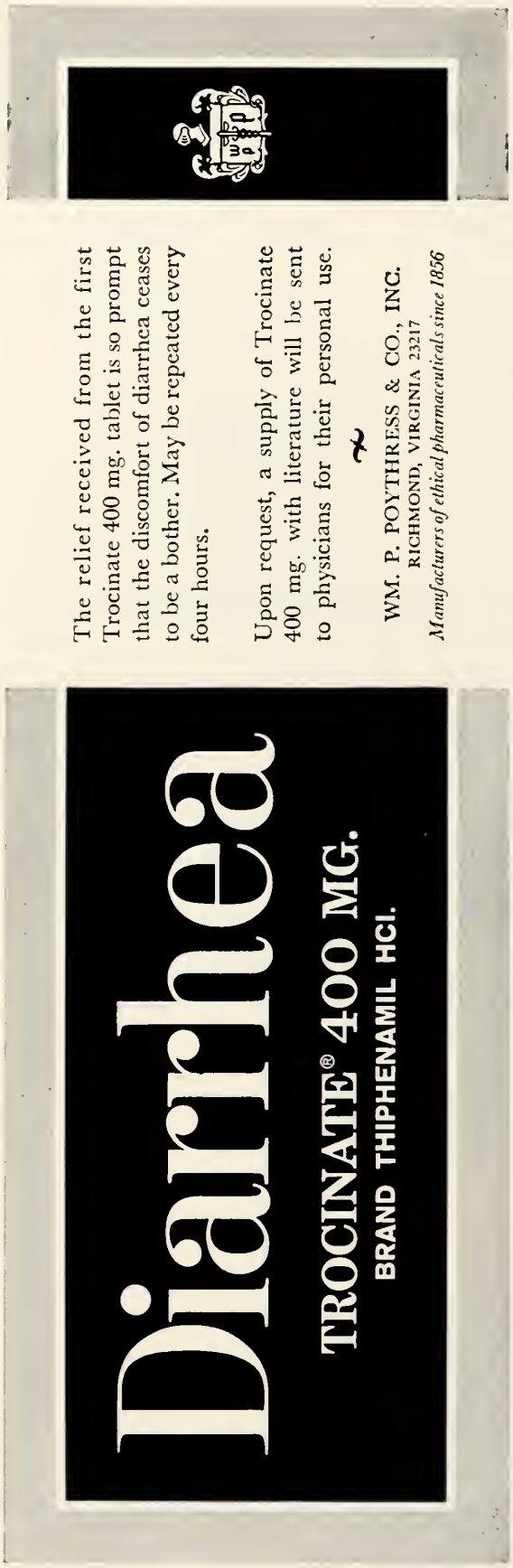
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Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

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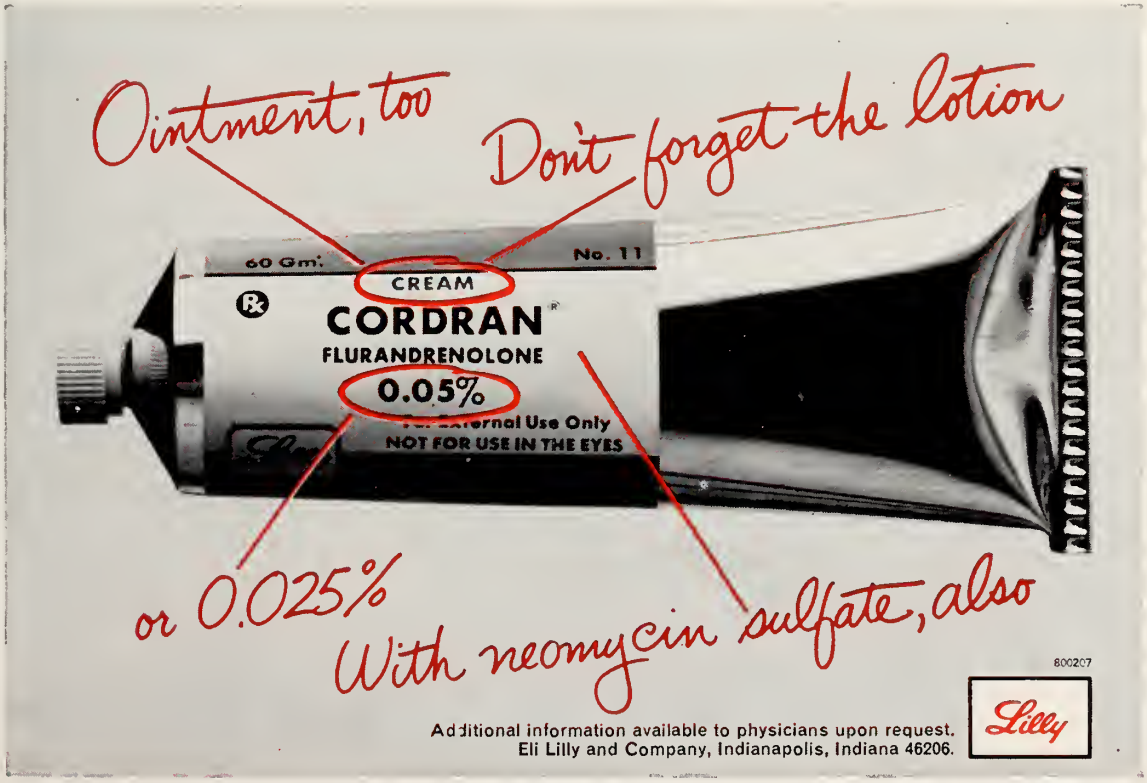
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References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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Precautions—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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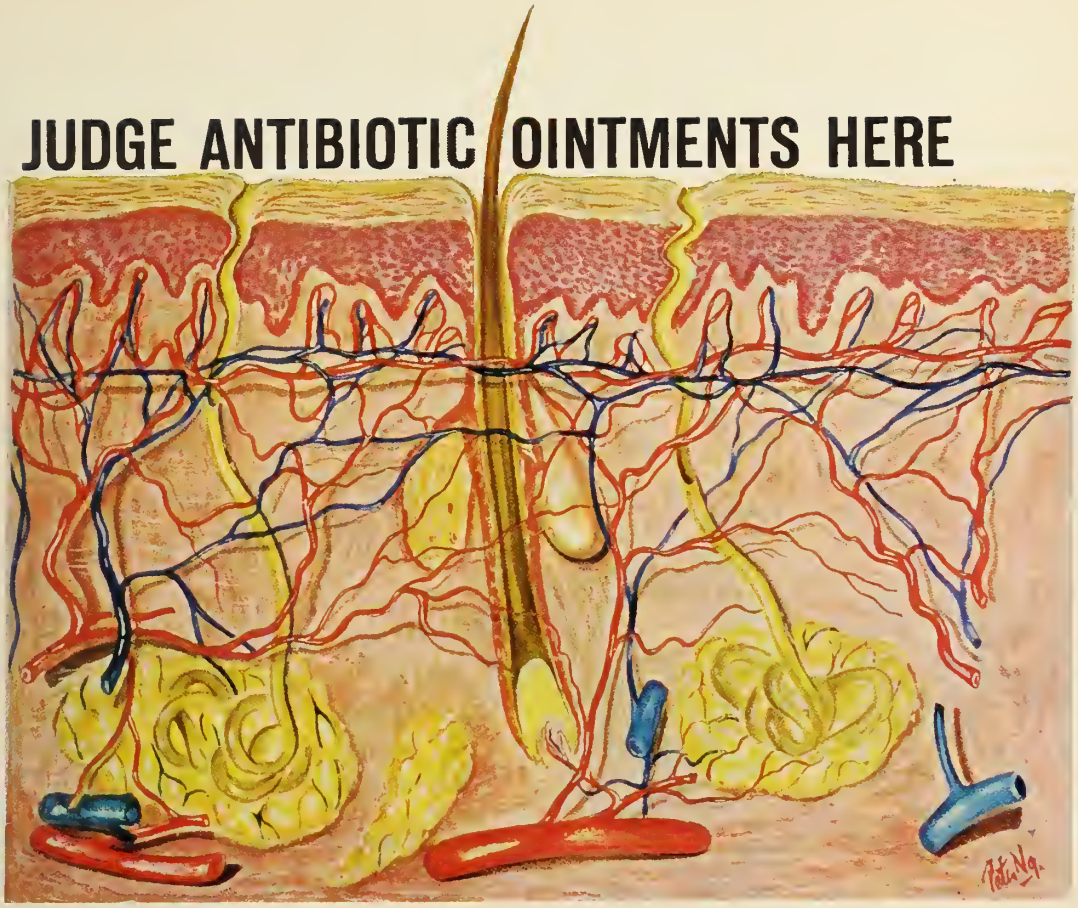
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Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

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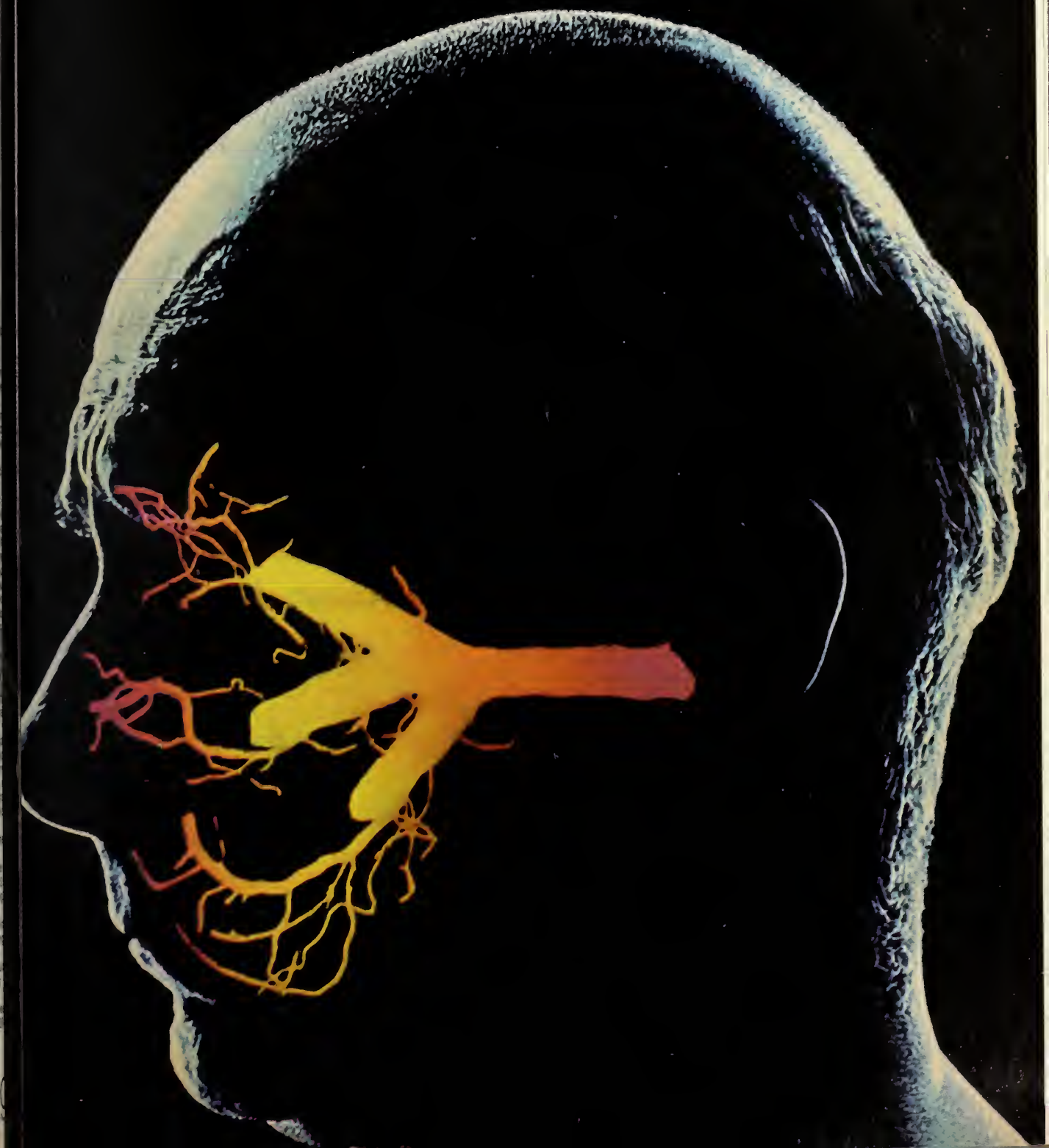
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Fatal cases of aplastic anemia have been reported following treatment with Tegretol. Agranulocytosis, thrombocytopenia and transitory leukopenia have also been observed.
Complete blood and platelet counts should be done prior to and at regular intervals during treatment with the drug (see recommendations under "Important Note and Precautions") to help in the early detection of serious bone marrow injury. Abnormalities in initial blood tests should rule out use of the drug. Also, patients should be made aware of such early toxic signs of a potential hematologic problem as fever, sore throat, mouth ulcers, easy bruising and petechial or purpuric hemorrhage. Should such signs appear, the patient should be advised to discontinue the drug and to report to the physician immediately.

Indication Tegretol is indicated in the treatment of the pain associated with true trigeminal neuralgia. It is not a simple analgesic and should never be administered for relief of trivial facial aches or pains.
Contraindication Do not use in those with a known sensitivity to any tricyclic compound or in those being treated with M.A.O.I. agents. As long a period as possible should elapse before using Tegretol in patients who have been treated with M.A.O.I.'s, with a minimum of 7 days. In such cases, initial dosage should be low and the patient's reaction to gradual increments closely observed.
Important Note and Precautions Familiarity with the clinical symptoms which lead to an accurate diagnosis of true trigeminal neuralgia and with the complete prescribing information, careful patient selection, a thorough examination before treatment and close patient supervision throughout the treatment period are essential to the safe and effective use of this drug.
Where feasible, Tegretol should not be used in conjunction with any potent drug which may increase the possibility of toxic reactions.
In pregnancy, the drug should not be prescribed during the first trimester and thereafter only to patients in whom the clinical situation warrants the potential risk. It should not be administered to nursing mothers.
Patients with increased intraocular pressure should be closely observed during treatment with this drug because of its anticholinergic effect.
Because of the drug's relationship to other tricyclic compounds, the possibility of activation of latent psychosis and, in the elderly, of confusion or agitation, should be considered.
Dizziness and drowsiness may occur and patients should be cautioned about the hazards of operating machinery or automobiles and of engaging in other hazardous tasks.
Use cautiously in patients with a history of coronary artery disease, organic heart disease, congestive failure or liver disease.
Before initiating therapy, the following laboratory procedures should be performed:
1. Complete blood and platelet counts which, if abnormal, should rule out the use of the drug.
2. Baseline evaluations of liver function.
During treatment with Tegretol, the following laboratory procedures should be performed:
1. Complete blood and platelet counts should be done at intervals of one week during the first month of drug treatment, every two weeks during the second and third months, and at monthly intervals thereafter for as long as the patient is taking the drug. A trend toward a decreasing white blood cell count should suggest a dosage reduction and more frequent laboratory and clinical evaluations. Should this trend continue, the dru should be discontinued.
2. Liver function tests must be performed at regular intervals during tre ment with this drug since liver damage may occur during therapy. The drug should be discontinued immediately in cases of aggravated liver dysfunction or active liver disease.
3. Periodic eye examinations, including slit-lamp, funduscopy and tonom etry, are recommended for patients being treated with this drug since many phenothiazines and related drugs have been shown to cause eye changes.
4. Complete urinalysis and BUN should be done on patients treated w Tegretol because of observed renal dysfunction.
Adverse Reactions Dizziness, drowsiness, unsteadiness on the feet, nausea, vomiting, aplastic anemia, transitory leukopenia, agranulocytos eosinophilia, leukocytosis, thrombocytopenia, purpura, abnormalities in liver function tests, cholestatic and hepatocellular jaundice, urinary frequency, acute urinary retention, oliguria with elevated blood pressure, albuminuria, glycosuria, elevated BUN, microscopic deposits in the urin impotence, disturbances of coordination, confusion, headache, fatigue, blurred vision, transient diplopia and oculomotor disturbances, speech disturbances, abnormal involuntary movements, peripheral neuritis and paresthesias, depression with agitation, talkativeness, nystagmus, tinnitus, paralysis and other symptoms of cerebral arterial insufficiency, pruritic and erythematous rashes, urticaria, Stevens-Johnson syndrome, photosensitivity reactions, alterations in skin pigmentation, exfoliative dermatitis, alopecia, diaphoresis, recurrence of thrombophlebitis, eryth multiforme and nodosum, aggravation of disseminated lupus erythematosus, gastric distress, abdominal pain, diarrhea, constipation, anorexia dryness of the mouth and pharynx, glossitis, stomatitis, fever, chills, adenopathy, lymphadenopathy, aching joints and muscles, leg cramps, conjunctivitis, left ventricular failure, aggravation of hypertension, hypotension, syncope and collapse, edema, aggravation of coronary artery disease and congestive heart failure. (Whether these cardiovascular effe are drug-related is not known. However, some of these complications ha resulted in fatalities.) The necessity for discontinuing the drug should b dictated by the gravity and severity of the adverse reactions.
Dosage and Administration The drug should always be taken with meal if possible.
Initial: One-half tablet (100 mg.) b.i.d. on the first day. Thereafter, the do should be increased in one-half tablet (100 mg.) increments every 12 ho until freedom from pain is achieved. To relieve pain, between 200 mg. a 1200 mg. per 24 hours may be necessary.
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Epidemic *Mycoplasma pneumoniae* Infection in a Boys' Summer Camp

Jerry C. Jacobs, M.D. and James R. Hughes, M.D.*

Synopsis – Abstract

An epidemic of respiratory disease in a Vermont boys' camp is described. Mycoplasma pneumoniae **was recovered from all 7 patients confined to the camp infirmary and from 11 of 33 other individuals.**

Between July 20th and August 29th, 1967, a total of 52 boys and counsellors at a Vermont summer camp developed acute illnesses characterized by fever (ranging from 100.4 to 106° F), headache, malaise, cough and sore throat. A few had diffuse low back pain and two had pleuritic chest pain. Pharyngeal erythema was commonly present and after several days fine crepitant rales could often be heard scattered throughout both lung fields, perhaps with the right axilla the most common single location. One patient had a pleural friction rub and one a pleuropericardial rub. There was no dullness or diminution of breath sounds. Chest x-ray examinations, performed in only a few patients, revealed pneumonic infiltrates in each.

Treatment with tetracycline appeared to be associated with prompt symptomatic relief and a shorter febrile course, allowing earlier ambulation and discharge from the infirmary. Cough persisted for up to three weeks despite treatment. The whole picture recurred in one patient one week after treatment was discontinued. Auscultatory findings commonly persisted up to two weeks and occasionally longer.

Approximately 175 boys and counsellors were in the camp housed in small cabin units and sharing common dining and recreational facilities. The epidemic began three weeks after camp opened when several boys became ill simultaneously. No index patient was identified. The overall attack rate was 30% with individual cabins ranging from 0 (0/7) to 71% (5/7). Boys in one cabin tended to become ill during one week or else to have a three week interval between cases. Patients were confined to the infirmary only if febrile or otherwise significantly ill. The camp continued in operation and the illness interfered little with the boys' enjoyment of their summer.

On August 10, 40 pharyngeal swabs were obtained from all the campers (5) and counsellors (2) in the infirmary and from the infirmary's relief nurse, as well as from all available "well" boys (26) and staff (6) of one cabin unit housing approximately 27% (47) of the camp population. Of the 15 campers or counsellors from this 47-member cabin unit *not* cultured at their unit, two were included in the infirmary population; 13 were engaged in camp activities elsewhere and were unavailable for study. Swabs were inoculated at the camp directly into tubes containing 2 ml of mycoplasma broth.** Subcultures to mycoplasma agar were performed at intervals at the Mary Hitchcock Memorial Hospital in Hanover, New Hampshire, and isolates were identified as *Mycoplasma pneumoniae* on the basis of glucose fermentation and hemadsorption of human erythrocytes to typical agar-grown colonies. All isolates were subsequently confirmed as *M. pneumoniae* by selective zone

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**Mycoplasma broth contained 7 parts Difco PPLO broth, 2 parts horse serum, 1 part fresh yeast extract, penicillin (1000 units/ml), thallium acetate (1:2000), 1% glucose, and phenol red indicator. Mycoplasma agar contained the same ingredients, substituting Difco PPLO agar for PPLO broth and deleting the glucose and phenol red.

TABLE 1

Mycoplasma pneumoniae ISOLATION RESULTS

Subject Activity	*Subject Role*	*Number of Attempts*	*Number Positive*	*Percentage Positive*	*Cumulative Percentage Positive*
Unrestricted	Camper	26	6	23	
Unrestricted	Counsellor	6	4	67	33
Unrestricted	Nurse	1	1	100	
Confined	Camper	5	5	100	100
Confined	Counsellor	2	2	100	
Totals		40	18		45

inhibition on agar with the use of commercial mycoplasma anti-sera discs.

Results of these studies (Table 1) confirmed the clinical impression that the epidemic was caused by *Mycoplasma pneumoniae*. One hundred percent (7/7) of the confined infirmary patients had positive cultures as did 33% (11/33) of the unrestricted individuals. The overall isolation rate was 45% (18/40). The data from the cabin unit were of little value as an indicator of those who had previously been significantly ill or would become so in the 2½ weeks remaining before the camp's scheduled closing. The major advantage of the cultures was in providing reliable and reassuring information for families and family physicians.

Summer camps bring into close contact large numbers of individuals in the second decade of life when immunity to *M. pneumoniae* is still low, when the clinical expression of infection is relatively characteristic, and at a time of year when the incidence of respiratory disease of other etiology is generally low. A summer camp is, therefore, a profitable setting for the epidemiologic study of mycoplasma infection.

ACKNOWLEDGEMENT

The technical assistance of Raymond H. Book, B.A., M.T. (A.S.C.P.) is gratefully acknowledged.

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As was true of the previous nine Conferences, the Tenth will cover a wide range of subjects of interest to those serving school and college athletic programs. Included will be forums on the management of knee injuries, back problems, and problems related to vision in sports. Other sessions will be devoted to a series of clinical concerns in sports warranting increased attention (eg, cauliflower ear, pulled muscles, facial injuries, and communicable disease). One discussion session will be devoted to the controversial issues affecting participation of young athletes, another to health and safety considerations in the conduct of aquatic activities.

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The Conference is open to key nonmedical athletic personnel as well as interested physicians. Those who would like to receive further information concerning the Conference should address the Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

The "Jumpers" of Maine

A Sociological Appraisal

GORDON E. MOSS*

Medical researchers observing the clinical and physical aspects of "jumping" have also described a large number of social characteristics that seem to accompany this exaggerated and sometimes violent startle response.[1,2,3] These studies have raised a number of questions about the influence of social experiences on jumping. In order to comprehend these social influences it was necessary to examine the "jumpers" in a systematic and less anecdotal fashion.

METHODS

The nature of jumping does not permit the drawing of a random sample since the total portion of the population who are jumpers is not known. Without a random sample conclusions about jumpers as a group, such as the relative proportion of jumpers in various social categories such as class, cannot be safely reached. But the social behavior and attitudes of individual jumpers can be described and compared, and the appearance of jumpers in various social categories, for example upper class, can be noted giving some clues to the range of jumpers' social characteristics.

The method selected involved the comparison of case histories of individual jumpers to provide detailed information on each individual and his social milieu. The case histories were derived from a self-administered questionnaire. Jumpers were located through newspaper articles carried in a number of Maine newspapers and magazines describing the research and asking for cooperation.

In addition to the questionnaire filled out privately by the jumper, a number of questionnaires were sent to people who had known jumpers and who expressed a willingness to provide more information. A considerable number of letters, phone calls, and personal communications were received providing additional background and comparative material. In this manner a total of 52 known jumpers were located; 16 volunteered and 36 were referred. Of these, 24 responded to the self-administered questionnaire: 5 males and 19 females. Twelve questionnaires were sent to people who knew jumpers who were willing to provide some concrete information on the jumper and his background. Eleven of these were returned; 8 on male jumpers and 3 on females.

While a considerable volume of communication was received about jumping most of this represented folklore and hearsay as well as vague recollections. There were, however, six letters and communications, some from jumpers, which were sufficiently reliable and detailed to be used in the study. This makes a total of 41 jumpers on whom information had been provided: 17 males and 24 females.

TYPES OF JUMPERS

Beard, who first described jumping among the French-Canadians in the Moosehead Lake region of Maine in 1878, noted that a jump never occurred spontaneously nor was it associated with a loss of consciousness.[2] The act of jumping occurs when, as Kunkle describes, ". . . men were easily startled by an unexpected sound or touch, sometimes reacting simply by jerking of the shoulders and arms, or, under a strong stimulus, making a more violent motion and crying out as if in alarm."[1, p. 355] He also reported on "killer" jumpers who exhibit ". . . an involuntary aggressive gesture or actual blow directed at the nearest bystander . . ."[1, p. 356]

Three types of jumpers were designated as a result of a comparison of the jumpers' descriptions of what they did when they jumped. These types were labeled "alarm," "defense," and "withdrawal."

The defense type was most clearly characterized by the involuntary striking out, usually with clenched fists, and at times even assuming a boxer's stance. The striking out was frequently in the perceived direction of the disturbance but if a person was visible he frequently became the instant target irrespective of his innocence. The aggressive movement of defensive jumpers didn't always involve striking out. It took many forms in variation: kicking out with the feet, especially if awakened suddenly; jumping up or out of bed; wild flinging of the limbs and anything being held at the moment or within easy reach. Kunkle's "killer" jumpers are found in this type. Vocalization sometimes, but not always, occurred and usually took the form of swearing and cursing.

In the alarm type of response there was an absence of the striking out movements. While a sudden physical movement was involved in this type it was not an aggressive movement, nor was it directed at any particular object. Commonly the hands are thrown into the air or over the face. One woman consistently slapped a table or similar piece of furniture with her hands when startled. Vocalization practically always occurred, most of the time in the form of screaming and yelling, frequently including swearing and cursing. In addition to a tensing of the muscles alarm type jumpers experienced

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accelerated heart beat, choking and gasping, trembling, and blushing. Many felt ill, suddenly depressed, or weak immediately after jumping. Some were angry but "bottled" it up, while others felt foolish or like crying.

In the third type, withdrawal, the jump became more of a sudden tensing involving sometimes hunching, closing the eyes, and catching the breath but involving some sudden limb and body movement. There was neither a vocalization as a rule nor a striking out. A whole body reaction was involved in the jump, including trembling, a "lump" or tightening" in the chest, and general tension. To one woman it felt like "electrical impulses traveling all along my body." After an episode the shock and tension only gradually subsided, sometimes taking several minutes, and frequently leaving the jumper nervous.

Greater susceptibility to jumping when tired or ill was mentioned by a few jumpers of all types.

The Social Context of Jumping

Jumpers were found in all socio-economic classes and in practically every level of education and income as well as all general occupational categories from laborers and farmers to professionals.

Ancestors of jumpers came from most of the European countries, especially England; from Canada; and from the American Indians. Most of the parents of jumpers in this study were born in America.

The fathers of these jumpers like the jumpers themselves came from practically all class, educational, and occupational categories. However, the majority of the fathers of the jumpers studied were skilled or unskilled workers and had a high school education or less.

Focusing on the jumpers' attitudes and reactions to being a jumper, we saw how a jumper defined and felt about himself and the situation he was in at a given time had considerable influence on whether or not he jumped, what startled him, and how he felt about the episode afterward.

The Startle Stimulus. Not all jumpers were startled by the same things and many were not startled by the same stimulus in every situation. In general, however, most jumpers were startled by loud, sharp, and unexpected noises; some by someone unexpectedly speaking to them or calling their name, even softly; by unanticipated appearance, sudden movement, or close contact with someone, or an animal. The source of startling stimuli was overwhelmingly from the actions of other people, one jumper commenting that he only jumped when startled by ". . . human noises."

The Situation. Jumpers were either generalized or specific in terms of the influence of the situation on their startle reaction. Slightly less than half of the jumpers indicated a generalized anxiety and tension and jumped in practically any situation where the startling stimuli appeared. It made no difference if they were in familiar surroundings or unfamiliar, with friends or strangers.

A little over half of the jumpers in the study jumped only in specific situations. Most of these were situations the jumper apparently defined as potentially threatening. For example, one man who felt he was not adequate as a father but was satisfied with his work, church, and civic activities, jumped mainly when at home and was startled by such things as his children spilling their food. His jumping outside of the home had decreased as he became acquainted with those he met socially or at work. In another case a young woman jumped when startled in uncertain situations such as interviews, at home or in quiet surroundings when deeply engrossed in thought, and at movies where the music was exciting. However, she practically never jumped at parties (unless someone made a special effort to jump her) where she would get involved and apparently lose her apprehensive self-consciousness and was not startled by stimuli that would make her jump in the other situations mentioned.

The concrete circumstances in which jumping occurred varied considerably. Some jumped mainly at home, others at work, still others at work and in public but not at home. The one situation in which a large proportion of the jumpers were easily startled was when the jumper was in quiet surroundings alone and concentrating intently on a thought or project.

The Social Role. The social roles that one plays influence how one defines himself and his proper performance in a given social situation. The type of jumper an individual becomes is considerably influenced by the sex role. In our society a man is expected to be aggressive, strong, and to stand up "like a man" to antagonists. The defense type most closely reflects the accepted behavior for men. All but two of the male jumpers were in this category.

Women are expected to be more expressive than a man. She can cry when she is hurt or disappointed and she is not expected to be aggressive. The alarm type most nearly fits the female sex role and over two-thirds of the female jumpers were in this category. The remaining females were divided equally between the defense and withdrawal types. Other social roles were much less important but may further modify the type of jumping. The one male who was in the withdrawal category was a professional and prominent community leader for whom the wild abandon of the defense response would be most indecorous. One of the females in the defense type was a spinster who had devoted herself to a profession and had taken on many of the competitive qualities of men.

None of the jumpers identified themselves as such. Rather jumping was to them an annoying and permanent nervous condition to be lived with but which did not interfere too seriously with living a normal life. None of the jumpers studied had ever sought professional help to correct it, and none had ever been hampered in his work or lost a job because of jumping. As might be expected some of the defense type jumpers had hurt people, but only a few of the other types had, main-

ly as the accidental consequence of the flinging of the limbs. None reported inflicting serious injury.

While most jumpers didn't mind being jumpers too much, a few intensely disliked it. Almost all of the jumpers disliked the embarrassment and feelings of foolishness that accompanied jumping episodes, especially when with new people and in situations where they wished not to appear odd, immature, or silly.

A few females enjoyed the attention they received from the person jumping them and those entertained by the spectacle. They were pleased they could make their friends laugh and used jumping as a means of gaining approval from their friends.

Being jumped on purpose by friends, relatives, work associates, or even close family members was nearly a universal experience. With the exception of the females pleased by the attention, the jumpers were angry and resented being teased. The jumpers were not offended if someone startled them accidentally. All but a few felt their friends and relatives did not think any less of them because they were jumpers.

Social Origins of Jumping. The social origins of jumping were obscure. Most jumpers could not remember when they began jumping. Some began in adolescence, some in adulthood. In one of the latter cases the jumping occurred only for a period of about two years during a particularly acute personal crisis and then subsided and disappeared. But for most jumping is evidently permanent once established.

Few could remember any childhood games or experiences that could have contributed to their development as jumpers. The exceptions include a woman who reported that her grandfather took great delight in surrounding himself with his grandchildren and then suddenly whooping and banging his heavy cane loudly on the floor. All of the other children learned to sit unflinchingly but the respondent always gave grandfather ". . . a satisfying jump" even when she knew it was coming. Other women reported friends and siblings jumping them from dark rooms or poking or tickling them. One woman believed she started jumping when she was in high school because it was a fad then to startle girls by sneaking up behind and surprising them.

Some researchers have found evidence for hereditary patterns in the affliction.[1] In this study only three jumpers were children of jumpers and only two others had relatives who were jumpers. All of the males had contacts with other jumpers at one time in their lives, but these were neighbors or fellow workers rather than relatives. While the majority of females had some contact with other jumpers, one-third had none. From descriptions of other jumpers they had known it was clear that the type of jumping observed was not always imitated by the jumper, especially if the observed jumper was of the opposite sex.

Despite this contact with other jumpers there did not appear to be a jumper sub-culture. Jumpers suffered alone; they did not join together to give one another support or discuss their situation, nor did they teach new recruits how to jump. Jumping appears to be the manifestation of similar adaptations by individuals to physical and social stresses in somewhat the same manner as are peptic ulcers.[4]

Non-jumpers typically saw jumpers as good fellows who had an interesting eccentricity that was more or less harmless but provided good entertainment. The jumper was not seen as sick or abnormal usually and was accepted and often liked by his associates.

There is a considerable amount of folklore about jumpers in Maine, especially among the natives. Embodied in this folklore is not only a description of the jumpers but an implicit set of attitudes about jumpers. One familiar with the folklore upon meeting his first jumper would know how to respond to him and predict his response.

Provoking a jumper with a startle was a game that seemed quite innocent to the non-jumper and he often persisted until the disgusted jumper insisted it stop. When observing a jump the typical response was either to joke and laugh while, in the case of the defensive jumper, moving hastily out of reach, or to act surprised and comment or apologize.

The jumper seemed to be used not only as a focal point for entertainment, but to provide some status for the one who jumped him in the form of approval from those onlookers he would impress.

Social Vulnerability

In the discussion of social vulnerability it will be necessary to use some sociological terms which are, so that we understand one another, defined here. The term "authoritarian" is used to designate a particular attitude toward obedience to those seen to be in authority. The person having an authoritarian attitude sees the one in authority as dominant; the follower is seen as submissive, giving unquestioning obedience. An authoritarian father expects to be instantly obeyed by his wife and children without any talking back; he also expects to do his work just as his boss tells him to without complaining.[5]

The term "instrumental" refers to attitudes placing primary importance on goal-attainment activity. Instrumental activity emphasizes both achieving the goals and using the means prescribed within a society and by those in authority. Instrumental and authoritarian attitudes are frequently found together. An instrumental person concentrates his energies and time on getting a task accomplished and tends to ignore and avoid "expressive" contact. He is more interested in getting a job done than how people he works with feel.

"Expressive" refers to a set of attitudes which might be considered in opposition to instrumental attitudes. Instead of being oriented towards goal-attainment, expressive people are interested in understanding how other people feel, in communicating emotionally as well as verbally with them, and in helping to integrate the

group by releasing tension and solving interpersonal conflicts.[6]

In every case of self-reporting jumpers there was considerable evidence that they had learned attitudes and developed motivations based on a strict authoritarian and instrumental orientation to life as a result of their childhood training. These jumpers felt for example that obedience to and respect for authority, doing the "right" thing, doing a good job, and getting the work done on time were the most important virtues.

Many jumpers felt almost compelled to work hard and some felt guilty for taking vacations and refused to participate in social organizations, preferring occupational and service organizations in some cases and joining no organization in most cases.

Those jumpers who had achieved a good deal in their occupation had more positive self-images, but this high self-esteem depended upon continued achievement and was often impaired by feelings of guilt for not achieving enough in other areas.

All of the self-reporting jumpers had difficulty developing intimate interpersonal relationships wherein they felt emotionally supported, accepted, and worthwhile. Many felt emotionally isolated, a lack of support and interest from parents, and unappreciated or not understood by parents and associates. They found no one with whom they could share personal feelings, hopes, or problems either because of disinterest or inability to comprehend. Thus jumpers are, in terms of the instrumental-expressive dichotomy, instrumental and lacking in expressive development.

With few exceptions the jumpers were socially isolated from one or more common avenues of human interaction. There was a lack of involvement and participation in social organizations such as clubs, fraternal organizations, service groups, special interest groups, and even churches. Many made little use of informational mass media such as books and magazines, but reading of newspapers and television viewing were quite high. They had acquaintances but few had close friends and even though some jumpers had considerable "social life" they still felt lonely. A local orientation was common and few jumpers had traveled or had any desire to travel.

It appears that jumpers' highly instrumental and authoritarian up-bringing coupled with the lack of emotional support, especially in childhood and adolescence, had produced an inadequacy in ability to expressively communicate, for example, to give others support, to express one's personal feelings, and to share emotional experiences. From descriptions of their parents by jumpers it was clear that most of the parents had the same problem and, lacking skills in expressive communication, could not teach them to their children. Jumpers bottled their feelings deep inside themselves. They felt that other people are not interested in how they felt or would not respond favorably. They were very much afraid of what others might think of them and feared being laughed at. Interrelated to these difficulties in communication was a widespread inadequacy in interpersonal relations among jumpers. Other people got on jumpers' nerves, hurt their feelings, let them down, and in other ways had not met the jumpers' expectations or hopes for respect or ego-enhancing social contacts. They had largely negative reactions to people while desiring very much to be accepted by them. They were anxious about how associates liked them and thought about them.

Others' reactions to the jumper lead him to define himself as a less desirable companion and friend and created in him considerable uncertainty about how to approach others except in formal, instrumental, authoritatively structured situations. But the jumper still wanted very much to be liked, respected, and accepted and adjusted by adopting an unoffensive style of interpersonal interaction. They frequently listed willingness, friendliness, and reliability as their strongest personal qualities.

The uncertainty and non-enhancing nature of the jumper's interpersonal experiences reflected in his self-image which tended to be unstable, unclear, or lacking in self-esteem. It also reflected in his ongoing behavior which, when not following strictly defined formal patterns such as when on the job, tended to be somewhat wavering and undecided. The majority of the jumpers reported having difficulty making decisions.

Since the major and sometimes only reliable source of positive reaction from others lay in the instrumental achieving of culturally prescribed and formal organizational goals, the jumpers put a great deal of effort into getting tasks completed and on time. They worried a great deal about little things associated with the task at hand.

This intense motivation to achieve or conform instrumentally apparently was a socially induced stress.[7] The jumpers had a strong commitment to work hard, do good work, and not to waste time. Achievement became important for a satisfactory self-image. The magnitude of achievement necessary to be satisfying ranged from great occupational achievement to getting the daily housework done on time and meticulously.

The inadequate, from the jumper's point of view, self-image, interpersonal relationships, social life, expressive communication, and emotional support were also sources of stress. Whether the improvement of these expressive skills and the relationship would counteract and minimize the stress and anxiety arising from the intense instrumental orientation must await further research.

The social stresses described, while apparently a major social correlate of jumping, are not limited only to jumpers. Other physical illnesses have been found to be associated with, if not in part caused by, the very social stresses upsetting jumpers. LeShan found emotional isolation and difficulty in establishing intimate relations along with feelings that acceptance by others depended upon successful conformity characteristic of a large proportion of cancer patients.[8] Concerning the im-

portance of expressive elements in mental health, Mowrer has said: "Now there is a growing realization, both in lay and professional circles, that the crucial element in 'mental health' is the degree of 'openness' and 'communion' which a person has *with his fellow men.*" (emphasis Mowrer's.)[9]

In the social context jumping may serve several possible functions for the jumper. It could be a means of maintaining social distance by discouraging intrusion upon the private person protecting the jumper from unexpected intimate contacts which emotionally he is unable, by experience and training, to receive. It could serve as a means of expressing and in part releasing anxious tension. For some it functioned as a means of getting attention and approval from their associates. It has been suggested that the defense type of jumper in particular may be acting out aggressive desires; and that the females who enjoy being jumped may also be enjoying symbolic sexual gratification, the intense physical reaction of jumping simulating orgasm.[10]

Summary and Conclusions

The form and circumstances of jumping are modified by the social definitions of the situation and of himself held by the jumper. Whether or not an individual becomes a jumper depends in part on the amount and kinds of social stress he experiences.

The sources of social stress found to be most significant were the lack of satisfaction with expressive social interaction, which includes difficulty in communicating expressively, in developing intimate relationships and in feelings of emotional isolation; and the feeling that acceptance by others and of oneself depended upon conformity to formal role definitions and instrumental achievement of goals.

Jumpers do not consider jumping to be a handicap but rather an annoying inconvenience, while associates accept jumpers and see his jumping as simply an interesting and entertaining eccentricity. Nevertheless the possibility of embarrassment from jumping is itself a minor source of social stress for the jumper.

Jumping does not seem to be inherited *per se* and is not limited to any one social category of people: i.e., class, education, occupation, nationality, age, sex. Jumping does not appear to be learned directly but rather to be an individual adaptation to social and physical stresses in the same category of maladies as peptic ulcers.

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FOURTH QUACKERY CONGRESS TO BE HELD OCTOBER 2-3;

AMA, NATIONAL HEALTH COUNCIL SPONSORS

The Fourth National Congress on Health Quackery will be held in Chicago on October 2-3 at the Drake Hotel.

Joint announcement of the Congress was made by F. J. L. Blasingame, M.D., executive vice-president of the American Medical Association, and Peter G. Meek, executive director of the National Health Council.

"Protecting the Consumer" will be the theme of the meeting.

Details, including the program of speakers, will be announced later. Inquiries should be addressed to: Joseph A. Sabatier, Jr., M.D., Chairman, Committee on Quackery, American Medical Association, 535 North Dearborn Street, Chicago, Ill. 60610.

Special Article

Allpyral®* Therapy

Systemic and Local Reactions — Four-Year Study**

Benjamin Zolov, M.D.‡

In 1965, I had the privilege of speaking to this group, the West Coast Allergy Society on a two-year study (1964-1965) of systemic and local reactions with Allpyral, alum precipitated extract.[1] My paper today briefly reviews those findings and includes a further study with Allpyral during the past two years.

There have been many papers written on Allpyral since the original study of Fuchs and Strauss[2] in January 1959. It is not my intention to detail the various results of this method of hyposensitization. However, I have been impressed with the fact that published articles as well as personal communications with physicians who are using Allpyral reveal that the systemic and local reactions have either been glossed over lightly, recorded in vague terms, or not at all.

I feel that it is important to emphasize such reactions in the hope that they may be recognized early and prevent further complications. It is often easy to get a satisfactory response from the patient in routine questioning by evading direct inquiry to specific complaints or to the medication taken, during the busy schedule of the day.

I was impressed with the reports on Allpyral therapy given by two doctors from England at the International Congress of Allergology in Montreal, Canada, last month. R. G. Evans[3] of Nottingham reported on a study of 200 patients, incorporating pollens and spores, (grass, tree, nettle and Hormodendrum). There were 4 cases of asthma recorded as systemic reactions. In assessing results, patients recording moderate or severe symptoms, or requiring tablets for relief of symptoms over 12 or more days in the season were classified as bad results. On this basis, 82.5% of patients recorded good results.

S.S. Kalinowski,[4] of Worcester, England, reported on 500 grass pollen patients treated with Allpyral. The largest group of systemic reactors complained of malaise for about 24 hours. Ten patients had hay fever, 6 developed asthma, and 2 patients had angio-edema for two days. Good results were obtained in 84%. In both of these series the top dose ranged from 4,000 to 10,000 units each season.

Report of Study

This study involves a total of 1,818 pollen patients who were sensitive to the tree, grass and ragweed pollens. The material used for all cases included Allpyral, mixed trees (alder, birch, elm, oak, maple, poplar), mixed grasses (Kentucky blue, meadow fescue, orchard, per.rye, red top, sweet vernal, timothy) and ragweed (high and low). They were all treated in my office on a perennial basis and include the results of four years of study and observation during the respective pollen season in 1964 through 1967. There were 140 tree patients (59 in 1964, 81 in 1965), 266 grass (116 in 1964, 150 in 1965) and 372 ragweed (169 in 1964, 203 in 1965) in this group. In 1964, although special note was made of their skin test reaction, each patient was given increases of the extract as tolerated, with no special classification being followed. The starting dose varied from 5 to 50 units at weekly intervals. The top dose in 1964 for trees was held at 6000 units, grass 8000 units and ragweed 15,000 units. During the respective seasons at monthly intervals the dose was reduced to 2000 units. In 1965, the top dose of trees and grasses was 5000 units, while the ragweed was 8000 units. During the respective seasons the doses were reduced to 1000 units. Most patients were seen at least twice during the pollen season. Thereafter interim injections were given at 6 to 8 week periods throughout the year. The top dose was given at least two weeks before the onset of the pollen season.

Seventy-six percent of the ragweed, 74% of the grass and 80% of the tree patients showed good results in the 1964 season with the above schedule. With the deliberate reduced top dose in 1965, 73% of the ragweed, 89% of the grass and 88% of the tree patients showed good results. Most of the systemic reactions took place in the 1000-2000 unit range, while the local reactions developed more often around the 500 unit dose.

In 1966, there were 212 ragweed, 183 grass, and 106 tree patients in the study. Of these, 21 (4%) developed local reactions, while 28 (5½%) had systemic reactions. Eighty percent of trees and grasses, and 78% ragweed had good results.

*Dome Chemical

**Read at the West Coast Allergy Society, Phoenix, Arizona, December, 2, 1967.

‡Chief of Allergy Clinic, Senior Visiting Physician, Maine Medical Center, Portland, Maine 04102.



Let's be specific about Campbell's Soups... and *reducing diets*



There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

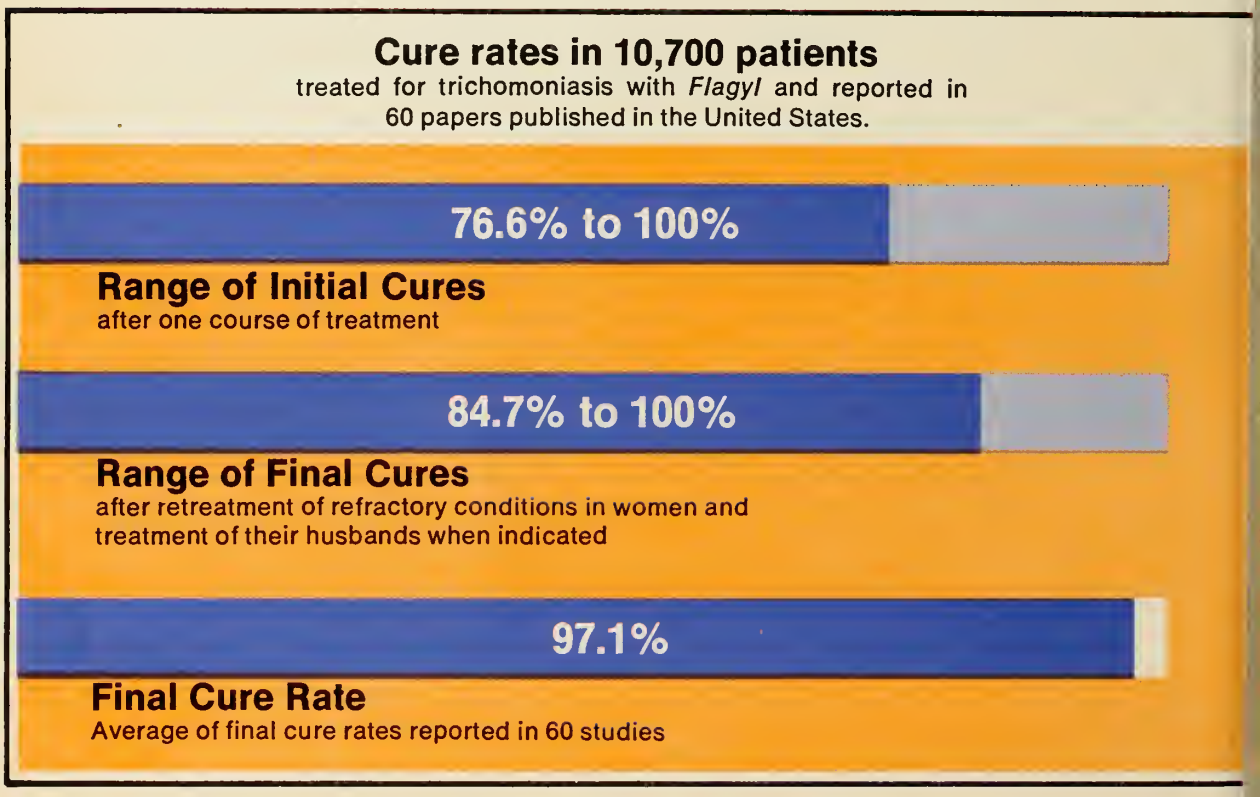
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True Drug Failure...

How often does it occur



Indications: Flagyl is indicated only in the treatment of trichomoniasis in both men and women.

Contraindications: Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution: Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side Effects: Infrequent and minor side effects include nausea, metallic taste and furry tongue Gastrointestinal disturbances, flushing and head ache sometimes occur, especially with concom itant ingestion of alcohol. The taste of alcoholi beverages may be altered. Other effects, all re ported in an incidence of less than 1 per cent, ar diarrhea, dizziness, vaginal dryness and burning dry mouth, rash, urticaria, gastritis, drowsines insomnia, pruritus, sore tongue, darkened urine anorexia, vomiting, epigastric distress, dysuria depression, vertigo, incoordination, ataxia, ab

with Flagyl®?

brand of

metronidazole

n clinical practice an occasional uncooperative or drug-sensitive patient
r spouse makes 100 per cent cure of trichomonal vaginitis in large series
f patients difficult.

Further a very few patients who apparently absorb Flagyl poorly
nd a few rare instances of trichomonads resistant to Flagyl have been
eported. Nevertheless, approximately half the United States investiga-
ors report a final cure rate of 100 per cent with Flagyl.

Sixty papers[1] published on the use of Flagyl in trichomoniasis in the
Jnited States and comprising a total of 10,700 patients have been evalu-
ted. In thirty of the papers it was declared that all patients adequately
ollowed and treated were free of trichomonal infection.

Analysis of all of these papers shows that the incidence of cures for
he *initial* course of therapy ranged from 76.6 per cent to 100 per cent.
The cure rates after retreatment of female patients and treatment of their
usbands when indicated ranged from 84.7 to 100 per cent. The average
nal cure rate reported in all investigations was 97.1 per cent.

---

dominal cramping, constipation, stomatitis, numbness or paresthesia of an extremity, joint pains, confusion, irritability, weakness, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

Dosage and Administration: In women: one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.

In men: When trichomonads are demonstrated, one 250-mg. oral tablet twice daily for ten days in conjunction with treatment of his female partner.

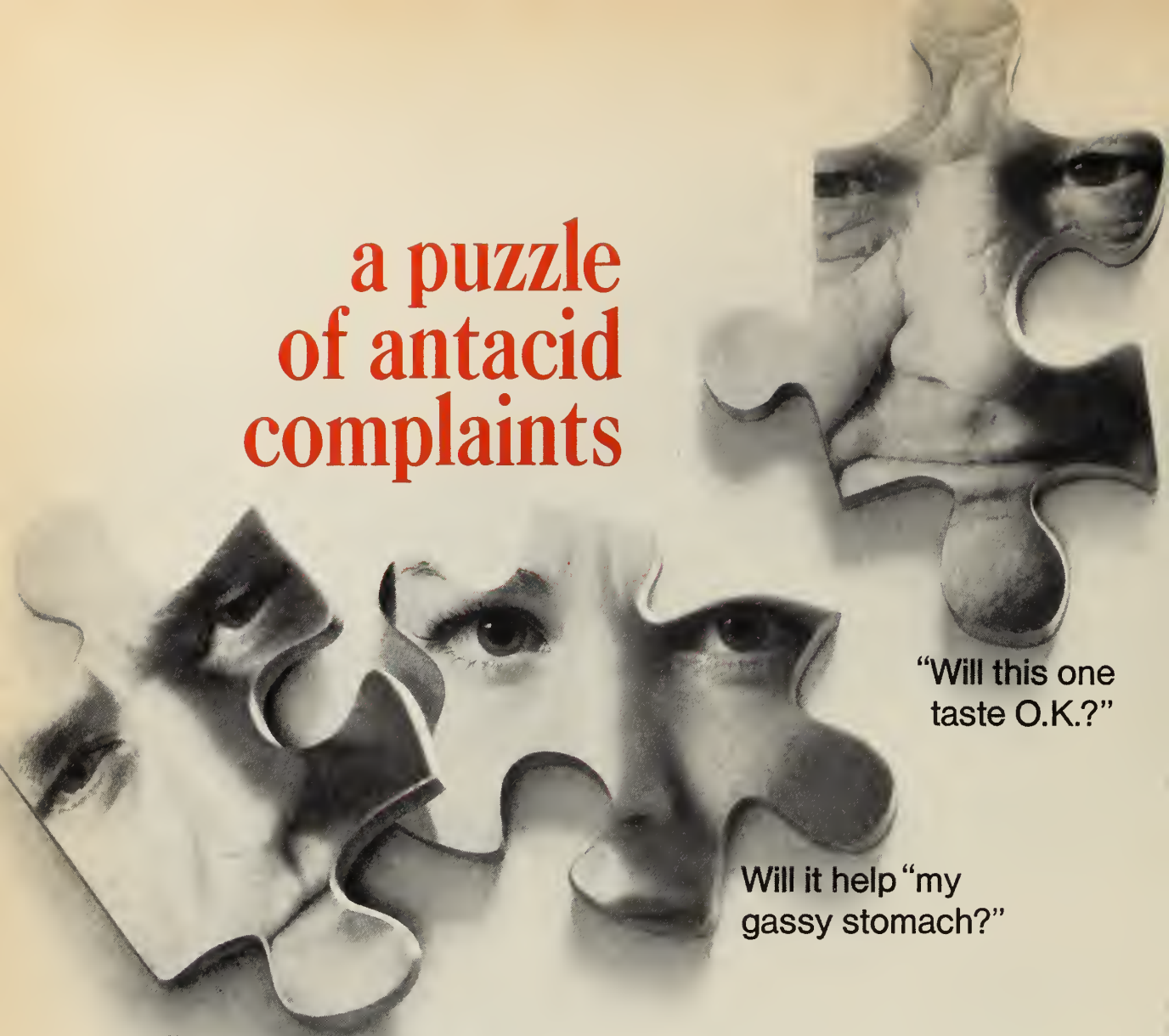
Dosage Forms: Oral tablets—250 mg.
Vaginal inserts—500 mg.

1. Complete list of references on request.

SEARLE

Research in the Service of Medicine

a puzzle of antacid complaints



"Will this one taste O.K.?"

Will it help "my gassy stomach?"

"Will it stop the pain?"

Mylanta®

aluminum and magnesium hydroxide *plus* simethicone

a solution to peptic ulcer distress

Effective neutralization—
with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

Concomitant relief of G.I. gas distress—
with the proven[1] defoaming action of simethicone.

Prolonged acceptance confirmed—
in 87.5% of 104 patients after a total of 20,459 documented days of therapy.[2]

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

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Stuart

Division/Pasadena, Calif.
ATLAS CHEMICAL INDUSTRIES, INC.

In 1967, 539 additional patients were added to the series. Systemic reactions occurred in 33 patients (6%), while local reactions were recorded in 50 patients (9%). Average top dose of trees was 5000 units, grass 6000 units and ragweed 10,000 units. Seventy-seven percent of the grass, 72% of the trees and 70% of the ragweed showed good results.

All patients were first tested by the scratch method. The small number who showed negative tests were subsequently tested intradermally. This served as a guide line for a few patients when initiating therapy but for the most part did not give any clue to the local or systemic reaction which developed. Since many of these patients were receiving more than one allergen for their respective pollen allergies it was difficult at first to be sure of the specific offending allergen which produced the reaction, although later this became more apparent.

The results in this study were classified as either; good, or not any improvement, with the injections. It was not easy at times to classify patients in such a clear-cut manner. Even with careful evaluation with each patient one often finds that some individuals who have mild to moderate symptoms will not take any anti-histamine; while others who may have had a slight amount of nasal congestion on awakening one morning, may take medication without interruption at regular intervals for many days. An honest attempt was made in this series to evaluate the complete patient regarding his results.

In this 4-year series of 1,818 patients there were 170 local reactions and 131 systemic reactions. The local reactions differed markedly from the type usually seen with aqueous extracts where often one observes marked local swelling, redness and itching. The common type of local reaction was marked itching developing about one to two hours after the injection and persisting for 24 to 48 hours. Rarely was there any local swelling or redness. Occasionally local hives at the site of the injection accompanied the itching. Often the patient took no medication for this type of reaction. Unless specifically questioned at each visit regarding this type of reaction, the patient would often fail to mention his discomfort. Naturally, it was helpful to have this information in order to avoid any future systemic reactions in some patients.

The systemic reactions varied in their intensity and form. Since most of them took place several hours after the injection, there was no need to require the patient to wait at least 15 minutes in my office after each injection. Here again it was important to question the patients carefully, otherwise many of the reactions would not be recorded or would be attributed to some other illness.

Case History

This forty-five-year old, single, female school teacher was first seen by me in November 1959. At that time she gave a history of perennial rhinitis and bronchitis with suggestive aggravation of her symptoms in the spring and fall for several years. Original skin tests revealed positive reaction to dust. For the next four years she was given aqueous dust therapy by her family physician and improved considerably. She was stung by a hornet in the fall of 1963 and developed intense swelling over her entire right arm, lasting about a week. There were no systemic symptoms. In April of 1964 the patient developed severe hay fever which persisted for six weeks, partially relieved with Diafen® tablets. She was retested in June 1964 and found sensitive to trees, insects and ragweed, and was started on Allpyral injections for these three allergies. A top dose of 8000 units of Ragweed Allpyral was reached before the ragweed season, with good results and no reactions.

Table 1

Allpyral 1964 and 1965
Systemic Reactions (9%)

	Tree (140)	*Grass (266)*	*Ragweed (372)*
Malaise	1	1	5
Hay fever	11	6	18
Urticaria	5	3	3
Bronchial asthma			3
Nausea and Vomiting			2
Hoarseness		1	2
Headache	1		6
Throat Itching			2
TOTALS	18	11	41
LOCAL REACTIONS (13%)			
	14	30	55

Table 2

Allpyral 1966
Systemic Reactions (5½%)

	Tree (106)	*Grass (183)*	*Ragweed (212)*
Hay fever	4	5	8
Malaise	1	2	1
Asthma		1	2
Urticaria		2	1
Headache			1
TOTALS	5	10	13
LOCAL REACTIONS (4%)			
	4	9	8

On October 17, 1964, twenty-four hours after an injection of Mixed Trees 40, Mixed Insects 200 and Dust 150, she developed itching and swelling over her right cheek which persisted for four days. There was no itching or swelling at the injection site. In November 1964 two hours after an injection of Mixed Trees 200 and Mixed Insects 200, she developed hoarseness and rhinitis lasting two days. She had no further reactions until March 1966 when she had a recurrence of redness and swelling over her left cheek with fine vesicular eruptions, twenty-four hours after an injection of Allpyral Ragweed 3000, Mixed Trees 3000, Dust 1000. This subsided in two days with Diafen and cool packs locally.

One month later Ragweed 3500 and Mixed Insects 3000 caused marked hay fever and malaise which persisted for two weeks, again there was no reaction at the injection site. She was fine thereafter until February 1967 when she developed severe laryngitis and bronchospasm twenty-four hours after an injection of Ragweed 2000, Mixed Trees 3000, Mixed Insects 3000 and was unable to return to school for a three-week period. She had marked weakness and a persistant cough, there was no fever. Seven weeks later the same injection dose was repeated and she had a similar relapse twenty-four hours later. This time she was put on Celestone,® 1.2 mg. daily for a one week period and improved at that time. Thereafter her Allpyral doses were reduced to Ragweed 1000, Mixed Trees 1000, Mixed Insects 1000 and Dust 100 units at monthly intervals and she enjoyed a good pollen season with no further reactions.

Table 3

Allpyral 1967			
Systemic Reactions (6%)			
	Tree (135)	*Grass (190)*	*Ragweed (214)*
Hay fever	1	4	5
Malaise	1		2
Asthma	1		1
Urticaria	1	4	2
Headache	2	4	
Nausea			1
Drowsiness		1	2
Hoarseness	1		
TOTALS	7	13	13
LOCAL REACTIONS (9%)			
	7	24	19

Table 1 lists the systemic complaints of those reactions (1964 and 1965). I have divided the constitutional symptoms into eight categories. Hay fever appears as the largest complicating factor in the list, comprising 50% of the involved cases while urticaria, intense headache and malaise accounted for 25% of the reactions. Table 2 records 5 categories, while Table 3 shows 8 categories. None of them was life-threatening nor were they sustained in the majority of cases. Most of them developed several hours after the injection and reacted fairly promptly with anti-histamine or Ephedrine preparations as the need arose. Here again, I was impressed with the fact that very few patients developed any local reactions prior to the systemic complication.

Discussion

Any method of therapy in treating pollen disease which minimizes severe reactions and yet allows us to adequately control our patients during the pollen season should be given a great deal of consideration. I feel that Allpyral fits this category in a large number of patients. Anyone who has experienced the life-threatening and severe reactions from the aqueous therapy can appreciate this newer approach.

One still must be alerted to the possibility of local and systemic reactions. Many of these can be subsequently prevented if we question the patient carefully at each office visit and assess the dose of the allergen that is proper for the patient. There are certain guide lines to be followed as outlined in the respective pamphlets, but we still must realize that the individual sensitivities exist and a slow or rapid schedule will depend on these differences.

The problem of high dose or low dose still requires further investigation. I have tried both methods on the unimproved patients, but have not been able to establish a protective dose in this group.

The ease of administration, the interval period of injections which can be 6 to 8 weeks, the minimizing of any serious reactions and finally the results obtained are important considerations in treating our pollen sensitive patients. Probably better refinements in the present Allpyral will enable us to reach a higher percentage of improvement in the group of intractable cases.

Conclusion

A total of 1,818 cases of tree, grass and ragweed sensitive patients were treated between 1964 and 1967 with Allpyral; overall good results showed, tree 77.5%, grass 79%, and ragweed 73%. Interval injections of 6 to 8 weeks were given without difficulty.

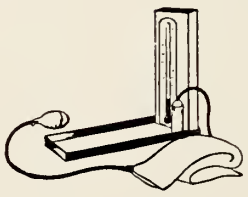
There were 170 local reactions, (9%), and 131 systemic reactions, (7%), in the entire series, none of them life-threatening. These reactions often were revealed only when the patients were carefully interviewed, since they were often attributed to some other ailment. Hay fever appeared in 50% of the systemic reactions, while hives, headache and malaise caused 25% of the reactions.

Naturally, the failure cases present a major problem and need for careful evaluation. Proper dose, as well as other sensitivities, may be important factors in this group. No abscesses nor cysts developed in the entire series. To my knowledge, only one abscess has been reported with the use of Allpyral. B. Berman[5] reported one breakdown at the site of the Allpyral inoculation, resulting in a sterile abscess, that healed without complications.

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Across The Desk

Physicians May Seek Indemnity From Hospitals

Two physicians sued by a patient for having left a sponge in her body during surgery were allowed to maintain a third-party suit against two hospitals on the theory that the hospitals were primarily negligent. The physicians could recover indemnity from the hospitals upon showing that the hospitals were primarily negligent, a federal trial court in Nebraska ruled.

In their complaint against the hospitals, the physicians alleged that if any negligence occurred which injured the patient, such negligence was that of the hospitals and their employees, and that if the physicians were held liable, it would be only because of their relationship to the hospital and not because of any negligence on their own part. The hospitals contended that the suit should be dismissed because the physicians were seeking recovery among joint tortfeasors which is not permitted under Nebraska law. The physicians contended that they were seeking indemnification, not contribution.

In indemnity, a party only technically or constructively at fault seeks to recover from the party actually at fault. In contribution, one of several tortfeasors, who has been compelled to pay damages for the wrong committed, seeks to recover a portion of such payment from the other tortfeasors.

The rule allowing indemnity is widely accepted. The rule is based on the reason that a person who is not negligent, but is held liable because of his relationship or status with a tortfeasor, should be able to recover from the tortfeasor. The court said that it believed that the Nebraska Supreme Court, if squarely presented with the issue of whether to allow indemnity, would allow it, especially since the alternative is allowing a wrongdoer to escape liability for his wrongs simply because another person, who committed no wrongful act of his own, has been made to respond in damages to the injured person. Further, on the basis of cases involving suits against an employer arising out of an employee's injury of the employee's wife or child, it could be persuasively argued that Nebraska has already adopted the policy, in fact if not in name. – *Melburn v. Walker,* 279 F.Supp.740 (D.C., Neb., Jan. 25, 1968) – THE CITATION, Vol. 17, No. 5.

Malpractice Testimony No Basis For Canceling Insurance

An insurer's cancellation of a physician's professional liability insurance because he testified in a malpractice suit brought against a physician covered by the same insurer is against public policy, a federal appellate court has ruled. If the physician can prove that his policy was canceled for that reason, the insurance company will be liable for breach of contract. Full text of the decision is included as a supplement with this issue of THE CITATION. — *L'Orange v. The Medical Protective Company,* – F. 2d – (CA-6, May 2, 1968) – THE CITATION, Vol. 17, No. 5.

President's Message

A Step in the Right Direction

This year, election year, is an all-important year for organized medicine. There is not much time left to act. In the past five years many health-oriented bills have been introduced in the Congress many of which will importantly affect the practice of medicine in this generation and generations to come. Over 1300 bills have been introduced so far this year and there is little likelihood that there will be a slowdown in the foreseeable future.

The American Medical Political Action Committee is vitally concerned with the composition of the next Congress. There are strong indications that the tide can be turned and that sufficient Senators and Representatives regardless of political affiliations can be elected to office to make the next Congress responsive to the real needs of American Medicine.

"MEMPAC," Maine's Political Action Committee, as a part of AMPAC, needs your help. This committee under the chairmanship of Dr. George W. Wood, III of Brewer has done a great job this year. It has a strong and enthusiastic membership which has already devoted many hours and traveled many miles in your interests.

In the words of Dr. Milford O. Rouse, President of the A.M.A., "If we do not act now, we cannot complain later if our freedoms are lost by default."

Won't you help in this vitally important year to insure American Medicine's right to once again assist in molding the patterns of high achievement in the health field? Please send your twenty dollars now to Mrs. Thomas Anton, Treasurer, 2 Sunset Drive, Old Orchard Beach, Maine 04064. Your membership will be deeply appreciated.

Paul S. Hill, Jr., M.D.
President

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Radio Spot Announcements Induce Teen-agers to Avoid Smoking

NEW YORK, N.Y. — An unusual series of nine anti-cigarette radio spot announcements, designed to induce teen-agers to avoid smoking, has been produced for the American Cancer Society by Hal Taylor Productions, Inc., newly-formed New York radio-TV commercial production house.

Under the over-all title of "The Professor," played by Len Maxwell, format for each spot finds the professor addressing a class of young swingers on some aspect of cigarette smoking. Using a satirically offbeat twist, instruction on such subjects as "How To Cough," "How To Light Up," and "How To Inhale" is given in the 60-second spots.

Half-minute messages offer information on "How To Save Money" and some "Ugly Rumors About Smoking." One of the three 30-second spots, titled "Courage Report" opens with the Professor addressing his class in this manner:

> "My topic for today is The Courage of Cigarette Smokers. Now most of us smokers are modest, but we must admit we are exceptionally brave. Of course some do chicken out . . . about one million cigarette smokers a year. Scared off by fear of lung cancer and heart disease! But most of us (Cough) bravely keep right on smoking!" (Cough, Cough . . . Fade) as Announcer closes by saying "A courage report from your American Cancer Society."

Most of the nine spots — four one-minute, three 30-second and two 20-second — end with the suggestion that if the listener would like further information he call the American Cancer Society.

Several members of the Hal Taylor Productions group have won an extensive list of important awards for radio commercials, including the 1967 International Sweepstake Award for "World's Best Radio Commercial of the Year" for copy and production for Ford Trucks. The Taylor staff also contains a Venice Film Festival Prize winner, an International "World's Best Radio Musical Commercial Under: 60 Seconds" and other impressive awards.

Hal Taylor served as Radio Recording Director and TV music producer for J. Walter Thompson Co. in New York for 11 years. Previously he had been producer-director, as well as musician-arranger for the American Broadcasting Company network in Chicago. Associated with Taylor is Neil O'Brien, former writer-producer and radio/TV group head at J. Walter Thompson, Lennen & Newell and Kenyon & Eckhardt in New York. Neil O'Brien is the author of "Television Advertising" an informative study of the industry and published by McGraw-Hill.

NOTE: For copies of these scripts please get in touch with Ted Adams at the American Cancer Society, 219 East 42nd Street, New York City, 10017. Telephone (212) 867-3700.

Maine Heart Association Notes
20 Winter Street, Augusta, Maine

Hypertensive Encephalopathy

Most physicians are familiar with the syndrome of a sudden elevation of blood pressure, preceded by a severe headache, and followed by convulsions, coma, or a variety of transitory cerebral phenomena. The pediatrician faces the problem in patients with acute nephritis, the obstetrician with toxemia of pregnancy, and the internist with hypertensive vascular disease. The intelligent management of these critically ill patients during the acute hypertensive episode has always been a difficult problem.

Hypertensive encephalopathy is associated with an increase in arterial blood pressure, diminished cerebral blood flow, cerebral arteriolar constriction, and cerebral edema.

Two syndromes must be differentiated from true hypertensive encephalopathy: (1) acute anxiety state with labile hypertension and (2) acute pulmonary edema due to hypertensive heart disease. . . .

Since encephalopathy is always accompanied by an increased vascular resistance — best reflected clinically by a high diastolic pressure — and since clinical experience has shown that clearing of the sensorium, cessation of convulsions, and release of vasoconstriction follow reduction in blood pressure, the primary aim of therapy should be reduction of arterial pressure.

. . . the drug chosen to reduce the arterial pressure depends on the clinical condition of the patient, particularly on the degree of cerebral ischemia present. If the condition of the patient is such that a 1½ to 2 hour delay . . . would not be harmful, parenteral reserpine is the drug of choice. . . . if immediate reduction in arterial pressure is necessary, . . . diazoxide becomes the drug of choice.

. . . In patients with encephalopathy due to toxemia of pregnancy or glomerulonephritis where sodium retention plays a more important role, 40 to 60 mg. of furosemide are now combined with reserpine . . . this combination results in a 25 to 30 percent reduction in mean arterial pressure which frequently lasts for 10 to 12 hours.

. . . Preliminary studies suggest that the combination of furosemide plus diazoxide produces a greater fall in arterial pressure and increases both the renal blood flow and urinary sodium excretion.

Submitted by Jacob B. Dana, M.D. Maine Medical Association.

Reference – Finnerty, F. A., Jr., The American Heart Journal, Vol. 75, pages 559-563 1968.

A BLUE SHIELD REPORT to DOCTORS



REPORT # 14

Covered Office Diagnostic Procedures

Remember . . . when covered diagnostic services are rendered, such as X-rays, EKG's, EEG's, basal metabolism tests, radioactive iodine uptake tests, pathology exams of spinal fluid or of surgically removed tissue, T-3 tests and PBI's, a regular Blue Shield claim form is to be used in reporting these services and payments will be made directly to the participating physician as is the case with all other Blue Shield services.

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PORTLAND, MAINE 04101

News, Notes and Announcements

State of Maine Board of Registration of Medicine
Secretary — George E. Sullivan, M.D.
Waterville, Maine
Physicians Licensed to Practice Medicine and Surgery in the State of Maine
July 11-13, 1967

Through Examination

Ali Agharabi, M.D., Queen's Hosp. Ctr., Jamaica, N.Y.
Leonardo V. Arano, M.D., Mercy Hosp., Portland, Me.
Robert Boivin, M.D., Sanford, Me.
Ajit K. Chadha, M.D., 121 Morning Side Circle, Parkersburg, Va.
Kevin Conway, M.D., 420 Franklin St., Rumford, Me.
George Diaz, M.D., 7920 W. Lawrence Ave., Norridge, Ill.
Efrain O. Dickson, M.D., 2 North 446 Pleasant Ave., Glen Ellyn, Ill.
I. Howard Foy, M.D., 429 Main St., Presque Isle, Me.
Alfred S. Howe, M.D., 91 Lincoln Ave., Wyandanch, N.Y.
Eung Ho Kim, M.D., 56 Townsend Ave., Boothbay Harbor, Me.
Jan F. Kosmowski, M.D., 2385 Dickens St., Far Rockaway, N.Y.
Manouchehr Mozayeny, M.D., 261 Ash St., Lewiston, Me.
Najib M. Pandya, M.D., 14 & 197 Lisbon St., Lewiston, Me.
M. Pazirandeh, M.D., 544 Shearer St., Greensburg, Pa.
Douglas Pye, M.D., Box 458, Elgin, N.D.
Morteza N. Rad, M.D., St. Mary's Hosp., Lewiston, Me.
Derek Robinson, M.D., 202 Mason Ter., Brookline, Mass.
A. Hamid Shahinfar, M.D., Caribou, Me.

November 14-16, 1967

Through Examination

Antonio Beitia, M.D., 38 Gesl St., Buffalo, N.Y.
Alexander Harley, M.D., Duke University Medical Center, Durham, N.C.
Aliasghar Hasheminejad, M.D., Mercy Hospital, Portland, Me.
Naum N. Karapashev, M.D., Akron City Hospital, Akron, Ohio
Ali Karbasian, M.D., 31 B Spring Terrace, Red Bank, N.J.
Narayanan Kasturirangan, M.D., St. Charles Hospital, Navarre, Toledo, Ohio
Anthony J. Keating, M.D., Wyoming Hospital Clinic, Pineville, W. Va.
Emmanuel G. Kopidakis, M.D., 36 East 17th St., Bayonne, Hudson, N.J.
Joseph Armando Leonardi, M.D., 11 Poulin St., Lewiston, Me.
Manucher Mohtashemi, M.D., Nassau Hospital, Mineola, N.Y.
Morteza Mozayeni, M.D., 261 Ash St., Lewiston, Me.
Ramnath Nayak, M.D., 3764 La Peltrie, Montreal 26, P. Q. Can.
Cuneyt V. Okay, M.D., 105 East Ave., Batavia, N.Y.
Luis M. Palomar, M.D., 403 Oak Manor NW, Massilon, Ohio
Suri Pappu, M.D., 525 East 82nd St., New York, N.Y.
Edmund F. Schueller, M.D., 4891 Newton Rd., Hamburg, Erie, N.Y.
Elia Shammas, M.D., 106 Blackstone Blvd., Providence, R.I.
Abdűl Baki Yigit, M.D., 1723 Iroquois Rd., Pueblo, Colo.

Through Reciprocity

Joseph F. Britton, M.D., 254 Archer St., Freeport, N.Y.
Leland R. Cornelius, M.D., 1308 Lakemont Dr., Dalton, Ga.
Ghazar H. Darakjian, M.D., C. M. C. Hospital, Beirut, Lebanon
Michael J. Festino, M.D., 69 Lindsay Rd., York, Me.
Marcia Fite, M.D., Pemaquid Point, Me.
Lawrence M. Green, M.D., U.S. Naval Radio Station (T) Cutler, East Machias, Me.
William K. Hite, M.D., 507 Jackson St., Charleston, Ill.
Chul Y. Hong, M.D., 33 Danforth St., Moncton, N.B.
Frederick B. Jordon, M.D., West Poland, Me.
Philip J. Keating, M.D., 590 Pleasant St., Milton, Mass.
Peter J. Leadley, M.D., RFD, Wayne, Me.
David Mac Myers, M.D., Brunswick NAS, Me.
James R. McKendry, Jr., M.D., 12 Spruce St., Augusta, Me.
Raymon W. McMullen, M.D., 4907 Sherman St., Lincoln, Neb.
David L. Moskowitz, M.D., 4 Trefethen Ave., Kittery, Me.
Henry M. Pollock, Jr., M.D., Box 353, Togus, Me.
John B. Richardson, M.D., 635 Sydenham Ave., Montreal, Quebec
Richard W. Scott, M.D., 52 Mulberry St., Longmeadow, Mass.
Sidney H. Sobel, M.D., 145 Sewall St., Augusta, Me.

March 12-14, 1968

Through Examination

Abbas Alaghemand, M.D., 78-40, 164th St., Flushing, N.Y.
Cornelius K. Blesius, M.D., Riverview Hospital, Red Bank, N.J.
Pin-Yang Chen, M.D., 171 Harrison Ave., Boston, Mass.
Monhem Dayan, M.D., 122 Ashland Place, Brooklyn, N.Y.
Ken Hashimoto, M.D., 368 Hovendon Ave., Brockton, Mass.
Mohamad Hashem Jafroodi, M.D., 125-05 84 Ave., Kew Gardens, N.Y.
Raymond Kyriakos, M.D., 27 W 17th St., Bayonne, N.J.
Changyul Oh, M.D., 147-38 72nd Ave., Flushing, N.Y.
Ki Whan Oh, M.D., 2711 South Washington Ave., Lansing, Mich.
Jose M. de Perio, M.D., 351 Herkimer St., Buffalo, N.Y.
Georgina G. Piquet, M.D., 330 Haven Ave., New York, N.Y.
James O. Smith, M.D., 54 North St., Bath, Me.
Jorge H. Sturam, M.D., 30 East Side Dr., Barrington, R.I.
Rahim Vakili, M.D., 115 Eckford St., Brooklyn, N.Y.

Through Reciprocity

Jeanne L. Ballard, M.D., Loring AFB, Me.
William O. Buell, M.D., 36 East 70 St., New York, N.Y.
Richard B. Chapman, M.D., 92 Highland St., Milton, Mass.
Simon A. Flynn, M.D., 169 Craiwell Ave., Springfield, Mass.
Badi-Uz-Zaman Mahmood-Ul-Haq, M.D., Kennebunkport, Me.
John R. Jacobson, M.D., Box 57, Readfield, Me.
Mohamed Kakvan, M.D., 15 E. Milton Rd., Brookline, Mass.
John T. Libby, M.D., 723 Congress St., Portland, Me.
Joseph H. Miskimins, M.D., Waterville, Me.
Brian R. Nagy, M.D., 207 Dickman Dr., Loring AFB, Me.
Joseph E. O'Donnell, M.D., Naval Hospital, Chelsea, Mass.
Lewis E. Phillips, M.D., 282 Washington St., Hartford, Conn.
John R. Richardson, M.D., 2000 Washington St., Newton Lower Falls, Mass.
Franz F. Schlunk, M.D., 833 Greentree Rd., Pittsburgh, Pa.
Arthur M. Scott, Jr., M.D., 390B Grant Rd., Fort Devens, Mass.
H. Wayne Tobin, M.D., 4743 Catalina, Shawnee Mission, Kans.
Donald E. Troop, M.D., 430 LaMina, Ajo, Ariz.



Quietude for the hypertensive

Butiserpine®

TABLETS

BUTISOL SODIUM® (sodium butabarbital) 15 mg. and Reserpine 0.1 mg.

Warning: May be habit forming.

for gentle, long-term, blood-pressure control

Butisol Sodium (sodium butabarbital) acts promptly to relieve anxiety while the low dosage of reserpine builds gradually to an effective level for continuous, smooth control of tension and blood pressure. Thus effective therapy can be achieved without the hazards of more potent antihypertensive agents or of reserpine in larger doses.

Contraindications: Porphyria, peptic ulcer, ulcerative colitis, mental depression, sensitivity to either component. *Precautions:* Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthesiologist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT.

Adverse Reactions: Drowsiness, skin rash, "hangover," systemic disturbances, increased salivation and gastric secretion, nausea, vomiting, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis and optic atrophy), dryness of mouth, syncope or dizziness, epistaxis, purpura secondary to thrombocytopenia, asthma in susceptible persons, nasal congestion, weight gain, and impotence or decreased libido.

Usual Adult Dosage: Initially, 1 to 4 tablets daily for one week; maintenance, 1 to 2 tablets daily.

McNeil Laboratories, Inc., **McNEIL** Fort Washington, Pa.

Butazolidin® alka
in rheumatoid arthritis.

If it doesn't work in a week,
forget it.



ut don't forget this about Butazolidin alka

ontraindications: Edema; danger of cardiac ecompensation; history or symptoms of peptic cer; renal, hepatic or cardiac damage; story of drug allergy; history of blood dys- asia. The drug should not be given when the atient is senile or when other potent drugs are ven concurrently. Large doses of Butazolidin ka are contraindicated in glaucoma.

arning: If coumarin-type anticoagulants are ven simultaneously, watch for excessive crease in prothrombin time. Instances of vere bleeding have occurred. Persistent or vere dyspepsia may indicate peptic ulcer; rform upper gastrointestinal x-ray diagnostic sts if drug is continued. Pyrazole compounds ay potentiate the pharmacologic action of lfonylurea, sulfonamide-type agents and sulin. Carefully observe patients receiving ch therapy. Use with caution in the first tri- ester of pregnancy and in patients with yroid disease.

recautions: Before prescribing, carefully elect patients, avoiding those responsive to utine measures as well as contraindicated tients. Obtain a detailed history and a com- ete physical and laboratory examination, cluding a blood count. The patient should not ceed recommended dosage, should be osely supervised and should be warned to scontinue the drug and report immediately fever, sore throat, or mouth lesions (symp- ms of blood dyscrasia); sudden weight gain ater retention); skin reactions; black or tarry ools or other evidence of intestinal hemor- age occur. Make complete blood counts at eekly intervals during early therapy and at week intervals thereafter. Discontinue the ug immediately and institute counter- easures if the white count changes signifi- ntly, granulocytes decrease, or immature rms appear. Use greater care in the elderly nd in hypertensives.

dverse Reactions: The more common are ausea and edema. Swelling of the ankles or ce may be minimized by withholding dietary lt, reduction in dosage or use of diuretics. In derly patients and in those with hypertension e drug should be discontinued with the ppearance of edema. The drug has been ssociated with peptic ulcer and may reac- tivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)46-070-A

or complete details, ease see full rescribing Information.

Butazolidin® alka Geigy

Capsules
phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

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BU 5463 R

When it's more than a bad cold



your patient can feel better while he's getting better

Achrocidin®

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In bacterial/allergic u.r.i., ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the tetracycline-sensitive organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals.
Contraindications: History of hypersensitivity to any component.
Warning: If renal impairment exists, even usual doses may lead to liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Hypersensitive individuals may develop a photodynamic reaction to natural or artificial sunlight during use. Individuals with a history of photosensitivity reactions should avoid direct exposure while under treatment, which should be discontinued at first evidence of skin discomfort.
Precautions: Some individuals may experience drowsiness, anorexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development may cause discoloration of teeth.
Adverse Reactions: Gastrointestinal—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity; onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels following full therapeutic dosage has been reported. This has disappeared rapidly when drug was discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy and in children given the drug during the neonatal period, infancy, and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Lederle

350-8

Abbott Antihypertensive Building Blocks

A simplified approach to the practical management of hypertension



Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persists for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON®

METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

When you wish to build further response, consider shifting to Enduronyl.

Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

Once a day, every day

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METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

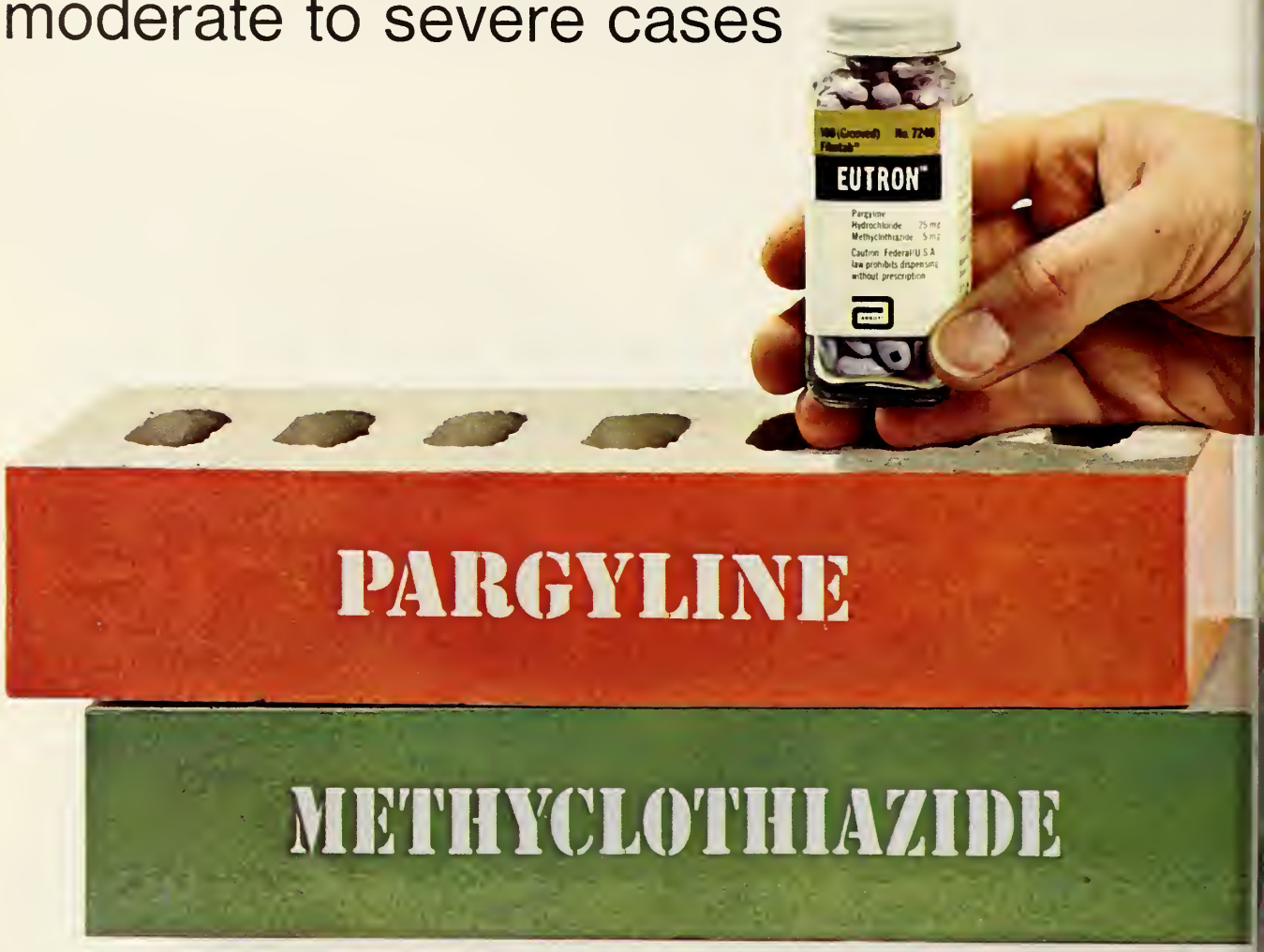
MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains Methyclothiazide 5 mg. with Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains Pargyline Hydrochloride 25 mg. with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

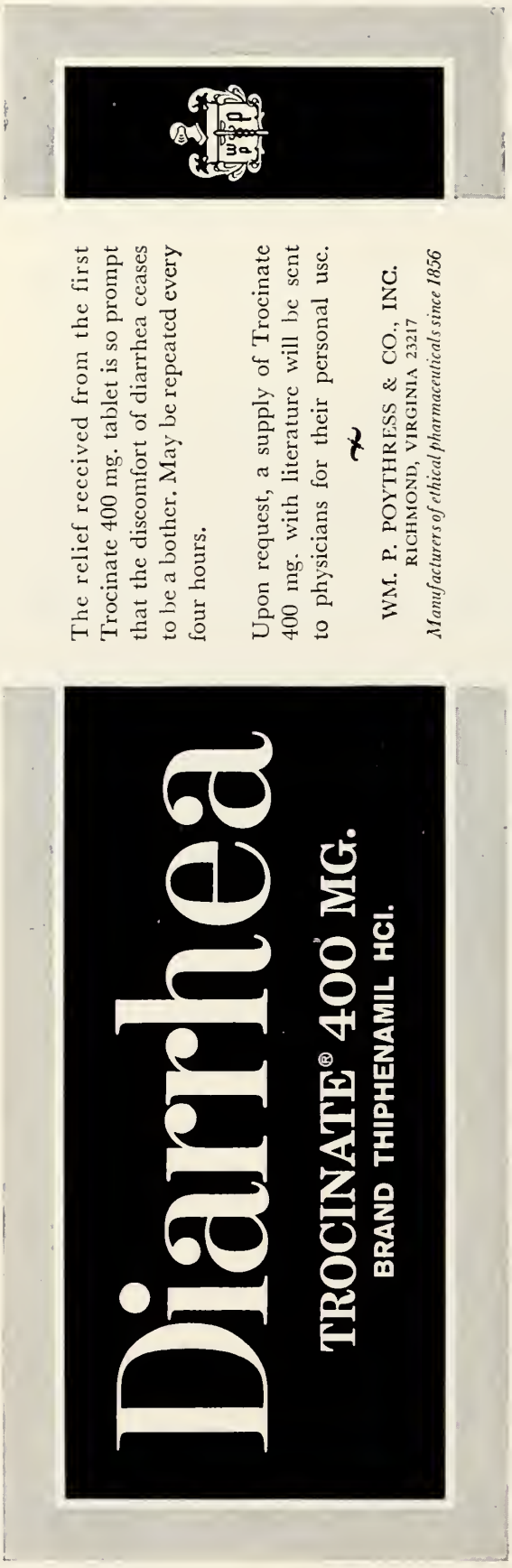
Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

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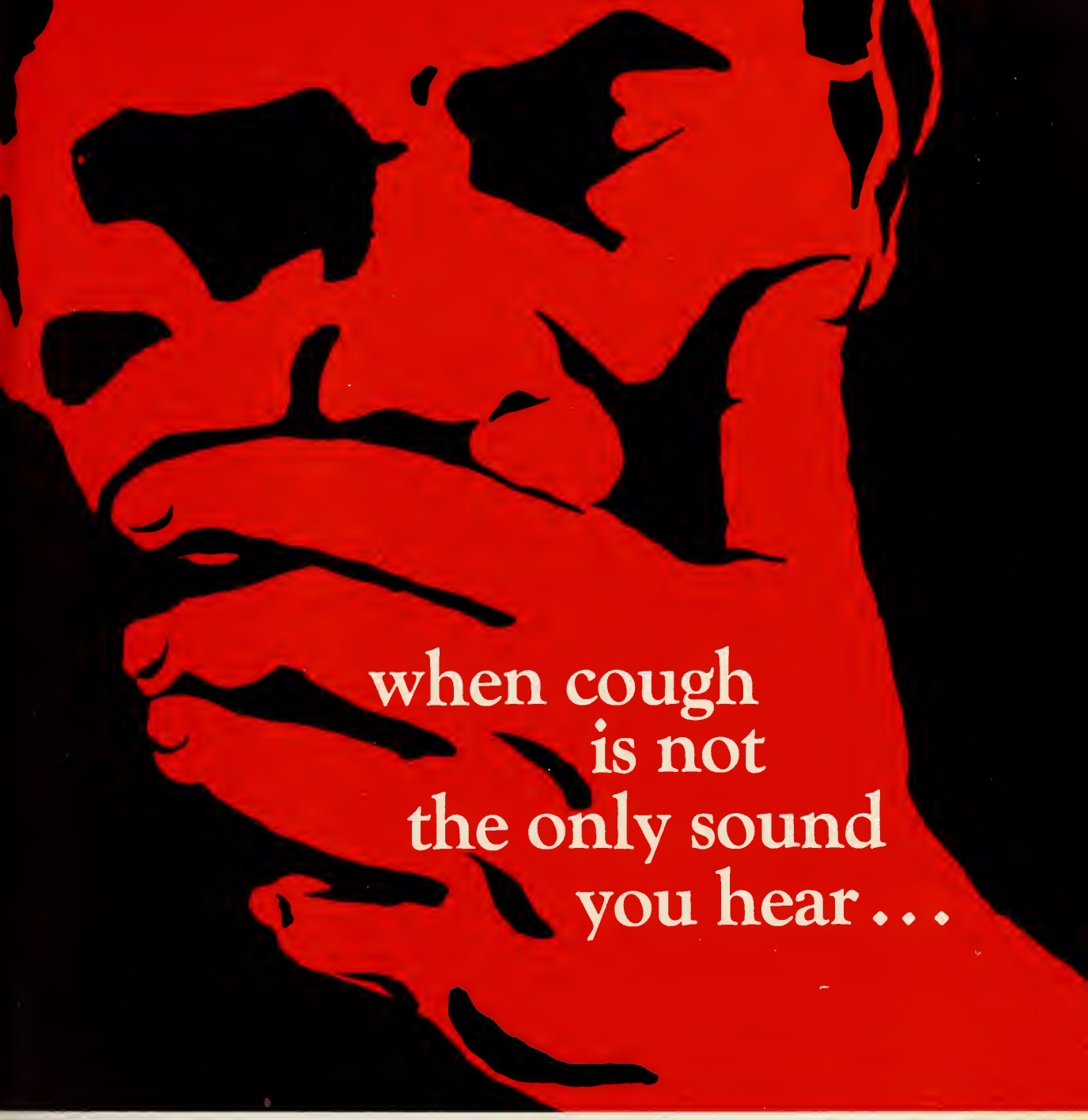
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Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

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The AMBAR SCRAPBOOK of Obesity Oddities

FACT & LEGEND



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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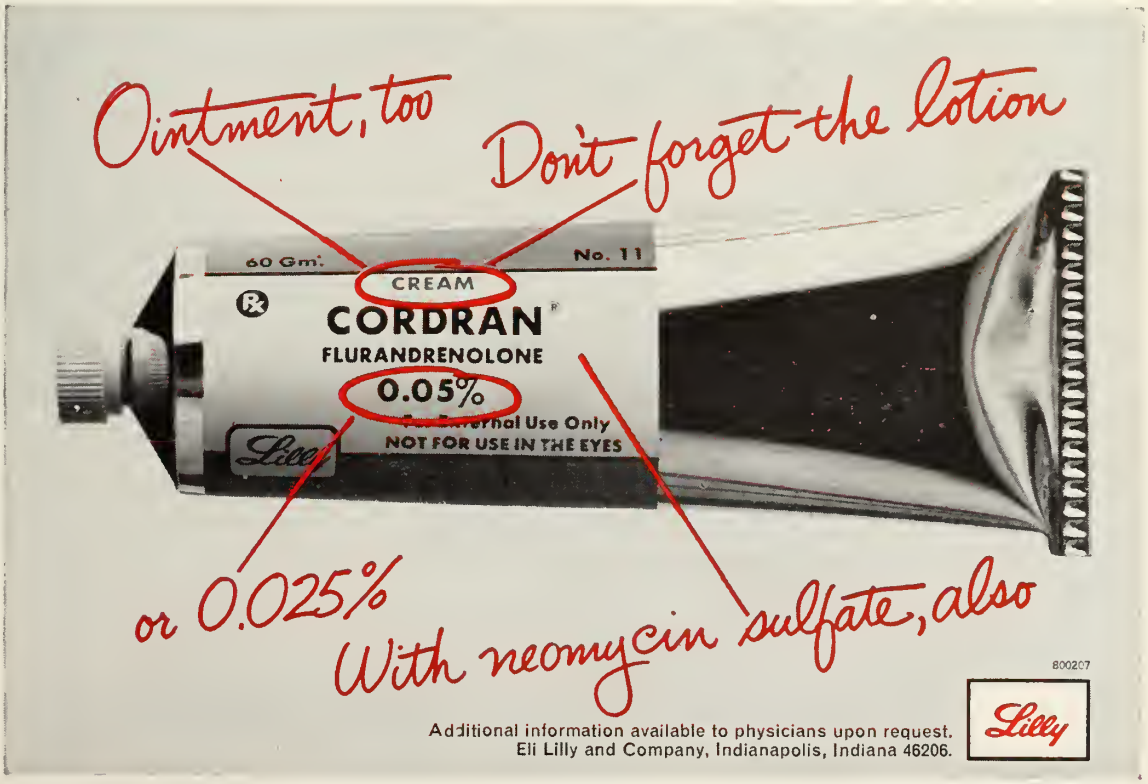
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Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

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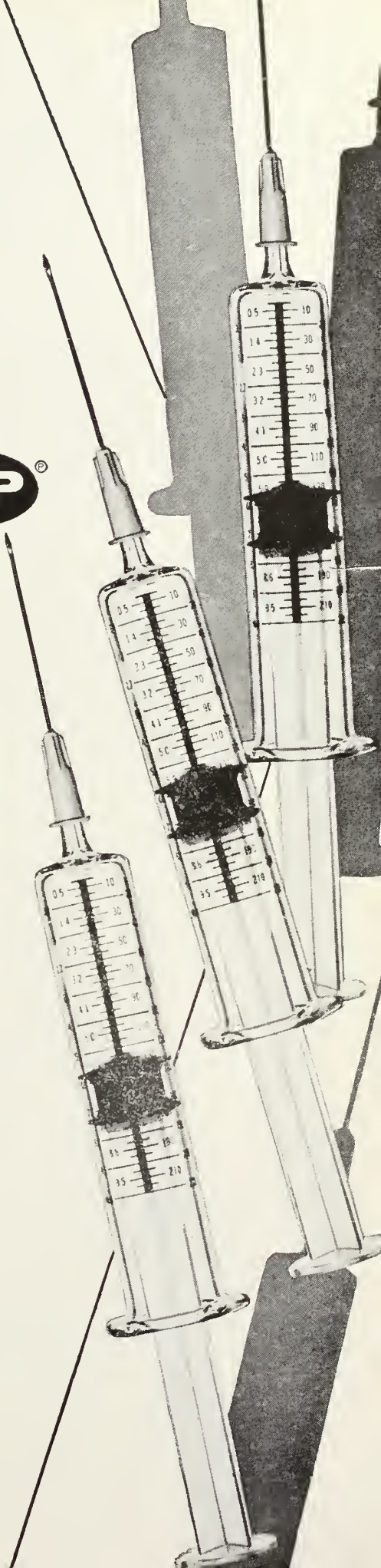
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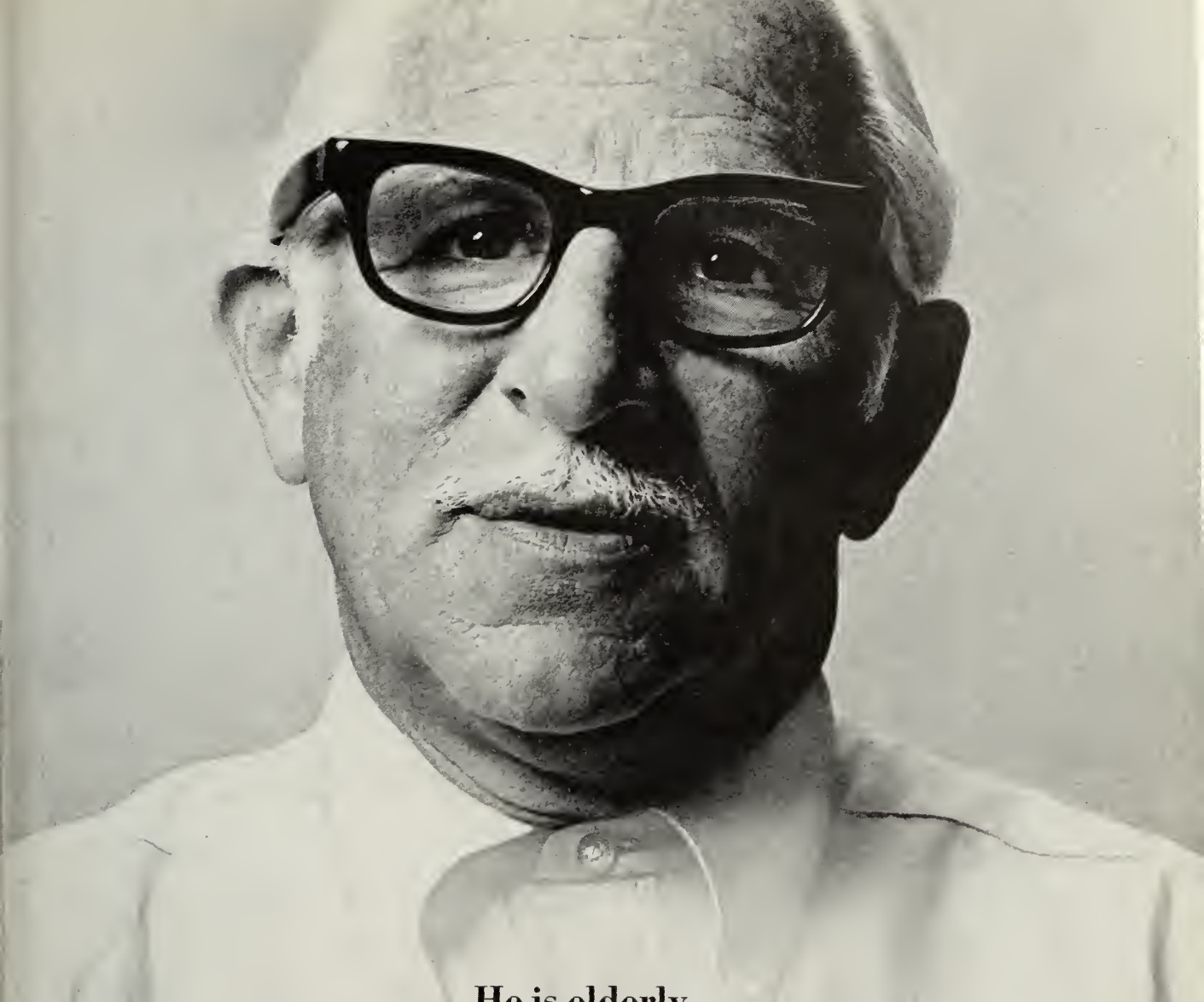
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken.

In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

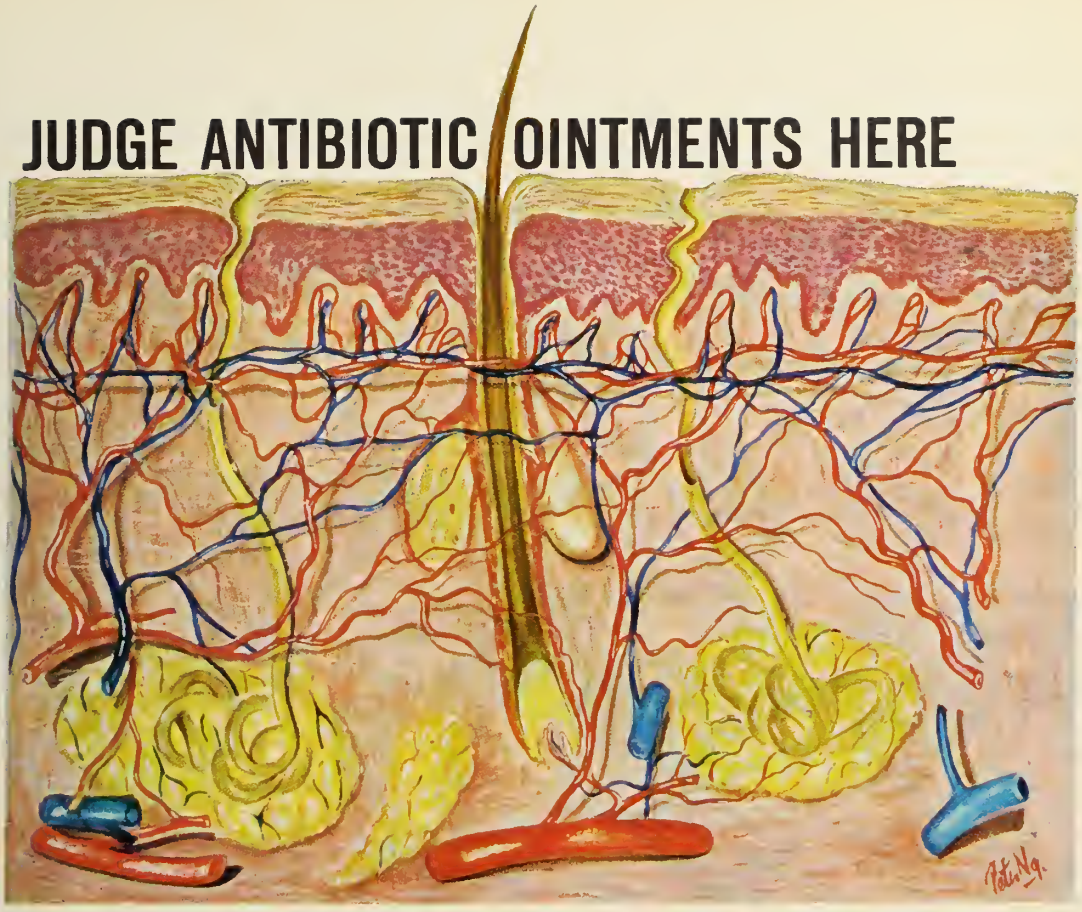
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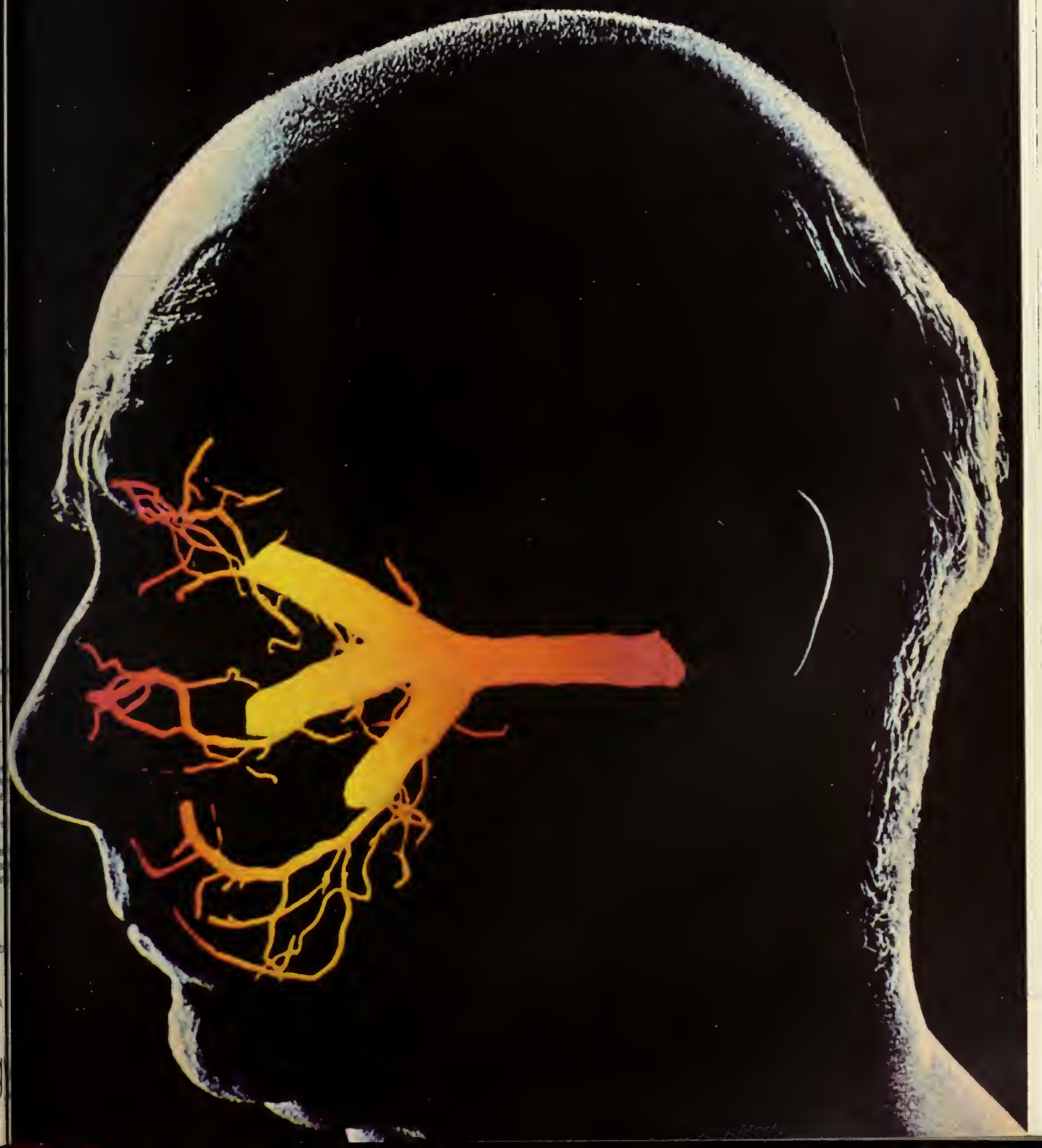
Warning
Fatal cases of aplastic anemia have been reported following treatment with Tegretol. Agranulocytosis, thrombocytopenia and transitory leukopenia have also been observed.
Complete blood and platelet counts should be done prior to and at regular intervals during treatment with the drug (see recommendations under "Important Note and Precautions") to help in the early detection of serious bone marrow injury. Abnormalities in initial blood tests should rule out use of the drug. Also, patients should be made aware of such early toxic signs of a potential hematologic problem as fever, sore throat, mouth ulcers, easy bruising and petechial or purpuric hemorrhage. Should such signs appear, the patient should be advised to discontinue the drug and to report to the physician immediately.

Indication Tegretol is indicated in the treatment of the pain associated with true trigeminal neuralgia. It is not a simple analgesic and should never be administered for relief of trivial facial aches or pains.
Contraindication Do not use in those with a known sensitivity to any tricyclic compound or in those being treated with M.A.O.I. agents. As long a period as possible should elapse before using Tegretol in patients who have been treated with M.A.O.I.'s, with a minimum of 7 days. In such cases, initial dosage should be low and the patient's reaction to gradual increments closely observed.
Important Note and Precautions Familiarity with the clinical symptoms which lead to an accurate diagnosis of true trigeminal neuralgia and with the complete prescribing information, careful patient selection, a thorough examination before treatment and close patient supervision throughout the treatment period are essential to the safe and effective use of this drug.
Where feasible, Tegretol should not be used in conjunction with any potent drug which may increase the possibility of toxic reactions.
In pregnancy, the drug should not be prescribed during the first trimester and thereafter only to patients in whom the clinical situation warrants the potential risk. It should not be administered to nursing mothers.
Patients with increased intraocular pressure should be closely observed during treatment with this drug because of its anticholinergic effect.
Because of the drug's relationship to other tricyclic compounds, the possibility of activation of latent psychosis and, in the elderly, of confusion or agitation, should be considered.
Dizziness and drowsiness may occur and patients should be cautioned about the hazards of operating machinery or automobiles and of engaging in other hazardous tasks.
Use cautiously in patients with a history of coronary artery disease, organic heart disease, congestive failure or liver disease.
Before initiating therapy, the following laboratory procedures should be performed:
1. Complete blood and platelet counts which, if abnormal, should rule out the use of the drug.
2. Baseline evaluations of liver function.
During treatment with Tegretol, the following laboratory procedures should be performed:
1. Complete blood and platelet counts should be done at intervals of one week during the first month of drug treatment, every two weeks during the second and third months, and at monthly intervals thereafter for as long as the patient is taking the drug. A trend toward a decreasing white blood cell count should suggest a dosage reduction and more frequent laboratory and clinical evaluations. Should this trend continue, the drug should be discontinued.
2. Liver function tests must be performed at regular intervals during treatment with this drug since liver damage may occur during therapy. The drug should be discontinued immediately in cases of aggravated liver dysfunction or active liver disease.
3. Periodic eye examinations, including slit-lamp, funduscopy and tonometry, are recommended for patients being treated with this drug since many phenothiazines and related drugs have been shown to cause eye changes.
4. Complete urinalysis and BUN should be done on patients treated with Tegretol because of observed renal dysfunction.
Adverse Reactions Dizziness, drowsiness, unsteadiness on the feet, nausea, vomiting, aplastic anemia, transitory leukopenia, agranulocytosis, eosinophilia, leukocytosis, thrombocytopenia, purpura, abnormalities in liver function tests, cholestatic and hepatocellular jaundice, urinary frequency, acute urinary retention, oliguria with elevated blood pressure, albuminuria, glycosuria, elevated BUN, microscopic deposits in the urine, impotence, disturbances of coordination, confusion, headache, fatigue, blurred vision, transient diplopia and oculomotor disturbances, speech disturbances, abnormal involuntary movements, peripheral neuritis and paresthesias, depression with agitation, talkativeness, nystagmus, tinnitus, paralysis and other symptoms of cerebral arterial insufficiency, pruritic and erythematous rashes, urticaria, Stevens-Johnson syndrome, photosensitivity reactions, alterations in skin pigmentation, exfoliative dermatitis, alopecia, diaphoresis, recurrence of thrombophlebitis, erythema multiforme and nodosum, aggravation of disseminated lupus erythematosus, gastric distress, abdominal pain, diarrhea, constipation, anorexia, dryness of the mouth and pharynx, glossitis, stomatitis, fever, chills, adenopathy, lymphadenopathy, aching joints and muscles, leg cramps, conjunctivitis, left ventricular failure, aggravation of hypertension, hypotension, syncope and collapse, edema, aggravation of coronary artery disease and congestive heart failure. (Whether these cardiovascular effects are drug-related is not known. However, some of these complications have resulted in fatalities.) The necessity for discontinuing the drug should be dictated by the gravity and severity of the adverse reactions.
Dosage and Administration The drug should always be taken with meals if possible.
Initial: One-half tablet (100 mg.) b.i.d. on the first day. Thereafter, the dose should be increased in one-half tablet (100 mg.) increments every 12 hours until freedom from pain is achieved. To relieve pain, between 200 mg. and 1200 mg. per 24 hours may be necessary.
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Use with caution in pregnant patients. Since the drug may cross the placental barrier, adverse reactions which may occur in the adult (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.

Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.

Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse Reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, hyperuricemia, headache, muscle cramps, orthostatic hypotension, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.

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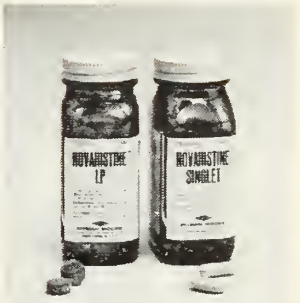
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Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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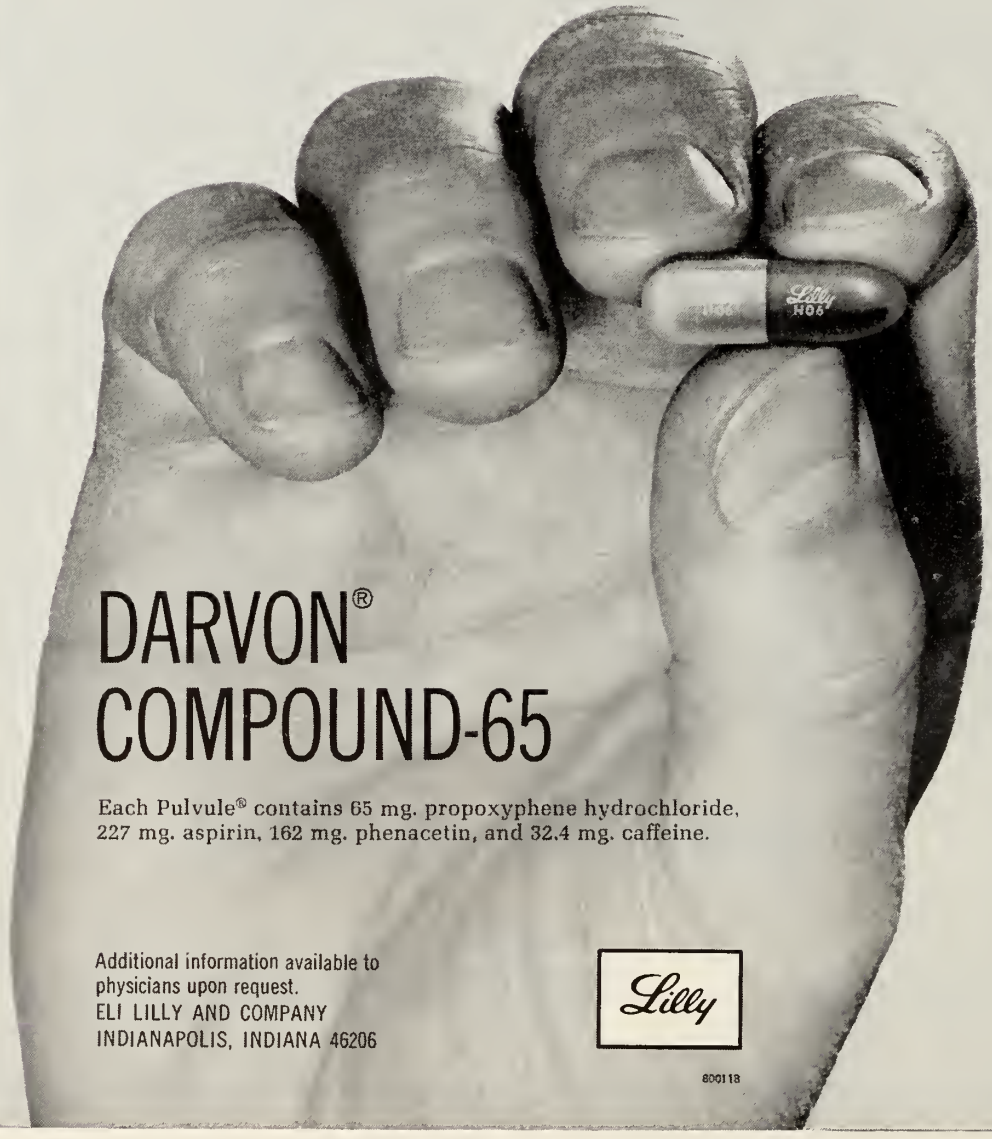
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The Journal
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Current Thoughts About Hypoxemia in Obstructive Lung Disease and an Interesting Complication from the Use of a Ventimask

Peter F. Lansing, M.D.*

Hypoxemia during acute episodes of respiratory failure can be severe and must be corrected. As we still do not have satisfactory clinical or even research methods to detect tissue hypoxia, with the exception of such gross changes as local pallor and low temperature, we must depend upon partial pressure of arterial oxygen (PaO_2) or arterial oxygen saturation. The precise value at which a PaO_2 can be considered to reflect satisfactory tissue oxygenation is arguable. It is agreed that a PaO_2 below 20 mm. Hg (arterial saturation of about 30%) is lethal within a few minutes. At a PaO_2 of 25 mm. Hg (oxygen saturation of about 40%) the available oxygen is just equal to the requirements of the resting subject.[1] At a PaO_2 of 40 mm. Hg the available oxygen equals 2 to 2½ times this requirement. Others[2,3,4] advise minimal PaO_2 values of at least 50 to 60 mm. Hg.

In view of the complexities of the factors controlling tissue PO_2 which involve parameters such as cardiac output, oxygen delivery to the capillaries, oxygen extraction from the capillaries, diffusing distance from the capillaries to the mitochondria, the precise PaO_2 at which there is minimal adequate tissue oxygenation will elude us for some time and may very well be settled finally by insisting on a combination of satisfactory values such as cardiac output and PaO_2, assuming that a simple tissue PaO_2 method will not be available for many years. In the range of PaO_2 from 25 to 40 mm. Hg the arterial PaO_2 is profoundly sensitive to variations in inspired oxygen as this range of PaO_2 coincides with the steepest portion of the oxygen dissociation curve. An increase of 4 to 7% of the inspired oxygen concentration will raise the arterial PaO_2 from 25 to 40 mm. Hg.[1,5,6] The worse the hypoxemia, the greater are the benefits from minimal increase of inspired oxygen content and the less are the chances of raising the $PaCO_2$ or hydrogen ion concentration to dangerous levels.[1,5,6] This is the rationale for the use of the Ventimasks† devised by Campbell which deliver 24%, 28%, and 35% oxygen concentrations. The mask operates on the Venturi principle, delivers a precise oxygen concentration, and avoids rebreathing due to the high air flow entering the mask. We have found this inexpensive mask quite satisfactory on the Pulmonary Disease Service at the Veterans Administration Center at Togus in the treatment of chronic and of occasionally acute respiratory failure associated with chronic obstructive lung disease. We fully realize that these masks have their limitations as reported by others[2] and that a given inspired oxygen concentration does not automatically guarantee a satisfactory PaO_2. Such factors as satisfactory cardiac output, uneven ventilation/perfusion relationship, the quantity of venous admixture, and diffusion barrier between alveoli and pulmonary capillaries are of utmost importance. Constant observation of the patient with emphasis on effective coughing, and adequate alertness together with repeated assays of his blood gasses are mandatory. We have noted that the masks tend to inhibit somewhat satisfactory coughing, have to be removed during eating, and readily lead to

*Chief, Pulmonary Disease Section, Medical Service, Veterans Administration Center, Togus, Maine 04330.

†Oxygenaire Ventimask available with separate 24%, 28%, and 35% oxygen concentration from the Bethlehem Corp., 225 West Second St., Bethlehem, Pa. 18015, representative for Vickers, Ltd., England.



Fig. 1: The usual manner in which a Ventimask is worn.



Fig. 2: Detail showing how laceration of fossa anthelicis is produced.

deep lacerations of the cartilaginous area between the earlobe and scalp (the fossa anthelicis) as illustrated in Figs. 1, 2, and 3. Such lacerations occur within 24 hours and last as long as a week in patients who initially are stuporous or semi-stuporous. Patients where this has occurred have had $PaCO_2$ values ranging from 59 to 90 mm. Hg and blood pH ranging from 7.26 to 7.31. These injuries can be avoided readily by use of a broader head band or a plastic head band.

The future management of acute respiratory failure



Fig. 3: Laceration of fossa anthelicis.

superimposed on chronic obstructive lung disease will likely rely more on controlled low oxygen flow therapy[4,7] or Ventimasks, intensive physiotherapy, adequate humidification, appropriate antibiotics, and correction of electrolyte imbalances. There will still be definite indication for mechanical ventilators after initial endotracheal intubation followed by elective tracheostomy in such patients as do not respond to conservative measures.

Long-term low-flow oxygen therapy over many weeks is beneficial to patients with hypoxemia associated with chronic airway obstruction. It results in increased exercise tolerance, decreased pulmonary arteriolar resistance, reverses secondary polycythemia, and improves overall clinical status.[8] It is expensive, but future statistics may indicate that it prolongs life. Renzetti[9] *et al* found a mortality rate of 72% for 4 years in those patients with obstructive lung disease who had hypoxemia and hypercapnea. Evaluation of such long-term therapy is now being carried out in multiple emphysema centers throughout the United States.

Summary

Oxygen therapy in acute and chronic respiratory failure is briefly discussed. Laceration of the fossa anthelicis occurring during the course of oxygen therapy with the use of a Ventimask is illustrated.

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Continued on Page 139

Long-Term Neomycin Therapy

ROGER G. METCALF, M.D.* and IRVING J. POLINER, M.D.†

SYNOPSIS-ABSTRACT

Under the limited conditions of this experiment, long-term neomycin therapy appeared to cause an unexplained variable alteration in certain biochemical aspects of intestinal absorption which are not equatable with the sprue syndrome. It did not produce observable pathological changes in the jejunal mucosa measured by light microscopy or brush border changes evaluated by electron microscopy.

This report concerns our observations of the effects of long-term neomycin therapy on certain laboratory studies of small bowel function correlated with jejunal histology in a 48-year-old male with compensated biopsy proven Laennec's cirrhosis.

It is appropriate to evaluate the use of long-term neomycin in this manner because neomycin sulfate has been implicated – perhaps unduly magnified – as a cause of a sprue-like syndrome both histologically and by absorptive and fat excretory studies with relatively short-term observations seldom lasting as long as one month[1–8] and also because prolonged therapy is effective and often necessary in the treatment of chronic liver disease manifested by episodes of liver encephalopathy.[9]

Originally, Jacobson and Faloon,[1,3,4] using 12 grams of neomycin sulfate per day, reported a change in the fecal excretory pattern and in small bowel absorption tests similar to those seen in non-tropical sprue. These changes were little affected by withdrawal of gluten from the diet nor did cortisone appreciably alter the described effects.[5] They sought to explain these findings with correlative pathology of the jejunal mucosa describing mucosal changes consisting of clubbing of the villi, edema of the lamina propria, and an increase in the number of lymphocytes. They felt, in the absence of good evidence to support intestinal hypermotility, that enzymatic poisoning or bacterial alterations could be implicated as a cause of the changes described. They then suggested long-term studies were needed to test the possibility that more profound alterations would be produced.[4,6]

Steiner[10] reported a reduction in cholesterol for as long as nine months with 2 grams of neomycin sulfate per day and suggested that this may have been related to alterations in intestinal flora or some local effect in the gastrointestinal tract. Although Rothfield[11] and Rogers[8] concluded that steatorrhea produced by neomycin was related to gluten or products of gluten digestion possibly on a toxic or histological basis, Levine[12] demonstrated that gluten in the diet failed to influence the development or extent of malabsorption produced by neomycin. He could not show histological change in the jejunal mucosa by careful study. Pryse-Davies and Dawson[13] could find no enzymatic or histological alteration in the bowel of neomycin-fed rats despite the production of steatorrhea by neomycin[14] in this animal.

Recently, and in consonance with the modern concepts of fat absorption,[15,16,17] Faloon has demonstrated precipitation of bile salts by neomycin.[18,19] This may in turn produce a disturbance in intraluminal micellar formation (micellar detergent deficiency) resulting in a faulty monoglyceride and fatty acid absorption.[15] On the other hand, Rogers[8] observed two patients fed moderate doses of neomycin and demonstrated a gluten-related steatorrhea associated with altered chemical indices of absorption, intraluminal accumulation of triglycerides and diglycerides with a decrease in fatty acids and monoglycerides, and histological changes by light microscopy somewhat similar to those described by Jacobson and Faloon. This suggested a hydrolytic defect related to the absorptive abnormality imposed by associated intestinal cellular damage or as previously observed *in vitro* by Meihte,[20] a direct inhibition of lipase action by neomycin. This, too, might produce a failure of intraluminal micellar formation (micellar solute deficiency).

Although the effect of neomycin upon the absorption of fat has occupied the principal experimental interest of most observers, its effect upon sugar absorption has been measured by the D-xylose tolerance test and the glucose tolerance test. The relation of protein absorption has been suggested from studies upon nitrogen metabolism. Mechanisms by which neomycin may alter these modalities have not been clarified except to infer that it may be due to mucosal pathological change.[2] In this regard it is of considerable interest that nutrient absorption seems to depend largely upon a sodium dependent active transport system localized to the brush border region of the intestinal epithelial cell.[21,22,23] Disaccharides are enzymatically hydrolized in the brush border.[21,22] Recently it has been shown that neomycin administration interferes with this mechanism, the suspicion being that this is a toxic inhibition or ultramicroscopic damage of the brush border.[24]

D-xylose absorption has recently been shown to be sodium dependent[25] while glucose selectively absorbed in the upper jejunum[26] has a similar dependence.[17,22] Although not previously investigated during neomycin administration, absorption of amino acids, including glycine, is possible through a sodium dependent system.[23]

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Table. 1. Studies performed during neomycin therapy.

Time	Xylose	Glycine	Fat Tolerance	Light Microscopy	Electron Microscopy
Patient Control	x	x	x	x	
Neomycin Started (8gms/day)					
2 Weeks	x	x	x	—	
1 Month	x	x	x	x	
2 Months	x	x	x	—	
4 Months	x	x	x	x	
Neomycin Stopped					
1 Week	x	x	x	—	
3 Months	x	x	x	—	
Neomycin Started (8gms/day)					
1 Week	x	x	x	—	
1 Month	x	x	x	x	
2 Months	x	x	x	x	
3 Months	x	—	x	x	
4 Months	x	x	x	x	
Neomycin Increased (12gms/day)					
9 Months	x	x	x	x	
11.5 Months	x	—	—	—	
12.5 Months	x	—	—	—	
13 Months	x	x	x		
15 Months					x
Neomycin Stopped (15 months)					
Patient Control (21 months)	x	x	x		x

Although we have not answered the questions concerning the mechanism by which neomycin operates, we have observed its effect upon dietary fat tolerance, glycine tolerance, and D-xylose tolerance, correlated with jejunal histology.

Case Report

A 48-year-old chronic alcoholic was admitted to the Veterans Administration Center, Togus, Maine, on February 26, 1960, with pneumonia, splenomegaly, ascites, and transient anemia. Liver function tests, including bromsulfalein retention, were normal with only the initial electrophoretic pattern showing hypoalbuminemia. Liver biopsy was performed on March 9, 1960, following recovery from his acute illness. This biopsy revealed classical Laennec's cirrhosis. There had been three previous admissions for jaundice and hepatomegaly in 1955, 1956, and 1959. The clinical diagnoses each time were cirrhosis of the liver and alcoholism.

The patient was under constant observation from the time of admission through October 25, 1962. It was decided to treat him during much of this time with neomycin and at the same time evaluate certain laboratory results of small bowel function tests correlated with jejunal histology. During the entire period the patient's health remained satisfactory. Deafness did not develop.[27] There were no overt signs or symptoms of liver disease, renal disease, or nutritional deficiency.

Methods

Fat absorption was estimated by the serum turbidity one to five hours after a standard fat meal.[28,29] Amino acid absorption was measured by the glycine tolerance test in which serum glycine was measured over a 4-hour period following the ingestion of 25 grams of glycine.[30,31] Carbohydrate absorption was evaluated by the D-xylose tolerance test, measuring the 5-hour urinary output after an oral dose of 25 grams.[32–35] In addition to these specific studies, routine laboratory investigations were carried out periodically.

Neomycin sulfate, 8 grams per day, was started in June, 1960, (first treatment period) following pertinent control observations. (Table 1) Four months later, neomycin was discontinued because of the presence of a pure culture of hemolytic staphylococcus in the stool.[36] After a 3-month rest period, neomycin was restarted in a dosage of 8 grams per day in January, 1961 (second treatment period). It was continued in this dosage until October, 1961, when it was arbitrarily raised to 12 grams per day and continued at that dosage through April, 1962, at which time all treatment was discontinued. The drug was continued during the second treatment period despite stool cultures which variously showed staphylococcus, pseudomonas, and proteus on one occasion each, and no growth or normal flora. There were no symptoms related to the changing flora of the stool except for occasional diarrhea chiefly at inception of treatment.

Jejunal biopsies were obtained with a Crosby capsule in a control period; at the end of a month and also four months of continuous treatment during the first treatment period; and after 1 month, 2 months, 3 months, 4 months, and 9 months of the second period of continuous treatment. Five months after the neomycin dosage was arbitrarily raised to 12 grams per day and 15 months in the second treatment period, jejunal biopsy was obtained with a Rubin tube for electron microscopy study. Jejunal mucosa was again studied by electron microscopy 7 months after neomycin was discontinued. The absorption tests were carried out at approximately the same intervals for correlative purposes and also at convenient times between the stated biopsy intervals. (Table 1)

Results

The standard fat tolerance test for absorption of dietary fat employs the determination of serum turbidity as an indirect measure of the chylomicron count.[28,29] The presence of an optical density of 0.1 or more in any one hour of a 5-hour period is considered normal. Sprue patients studied by Kabler did not develop an optical density of 0.1 or more at any time during the test. In our patient a normal pattern prevailed in each time interval studied.

Butterworth described the use of the glycine tolerance test in non-tropical sprue measuring glycine levels in the blood from 1 to 4 hours after ingestion of 25 grams of glycine.[30] He pointed out that the peak absorption of normal controls occurs by 1 to 2 hours after which blood glycine levels begin to fall. Normally the level reaches a mean of 17 times that of a fasting value. This is in contrast to non-tropical sprue in which the peak may be as high as that found in controls but is delayed at 2, 3, and 4 hours by the slow continued rise rather than a sharp peak and decline. Our results may be seen in Fig. 1. At no time was the shape of the curve similar to the curves found in non-tropical sprue or treated non-tropical sprue.

Normal values for xylose tolerance are recorded and quoted by Butterworth[33] and Finley[34] as having a mean between 4.68 grams and 8.46 grams with ranges between 3.3 to 10.5 grams. Untreated sprue patients demonstrate much lower values with means of 1.4 grams in one series[33] and comparable values in another series.[34] Xylose excretion after short-term neomycin administration is reported to be reduced 35% or more in most patients so treated depending somewhat upon the dosage. Throughout the present study, urine xylose levels after oral xylose administration varied considerably from reported controls and also the patient as his own control. There was a distinct fall during the first four months of treatment followed by a rise above normal patient control levels when neomycin was discontinued. When neomycin was re-administered there was a sharp fall at the one-week interval. With several exceptions when rather low values were obtained, the levels of urinary xylose rose close to some normal controls but were still less than the patient as his own control. Two weeks after neomycin was increased from 8 to 12 grams on October 9, 1961, xylose excretion rose sharply to the normal range of reported controls and fell to subnormal values 3 months and 4 months later, only to rise within the normal range for reported controls but still less than the patient as his own control during the fifth month of observation. Six months after neomycin had been stopped, the xylose excretion reached the patient's normal range values. (Fig. 2)

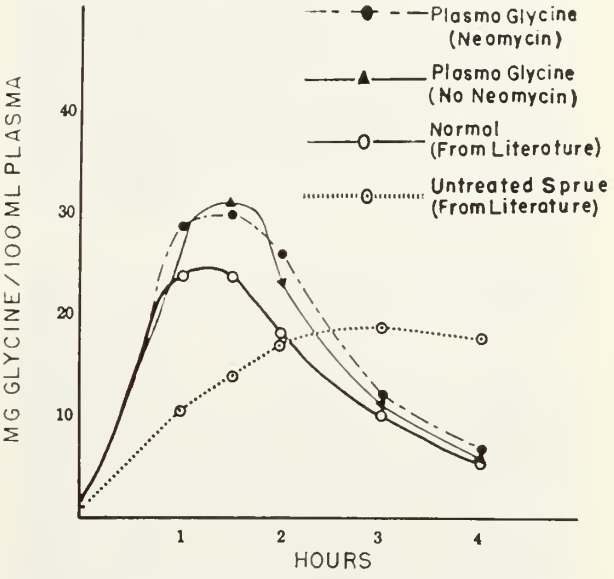


Fig. 1. Plasma glycine after oral administration of glycine. The absorption curve during neomycin therapy is similar to control curves and does not resemble that seen in idiopathic sprue.

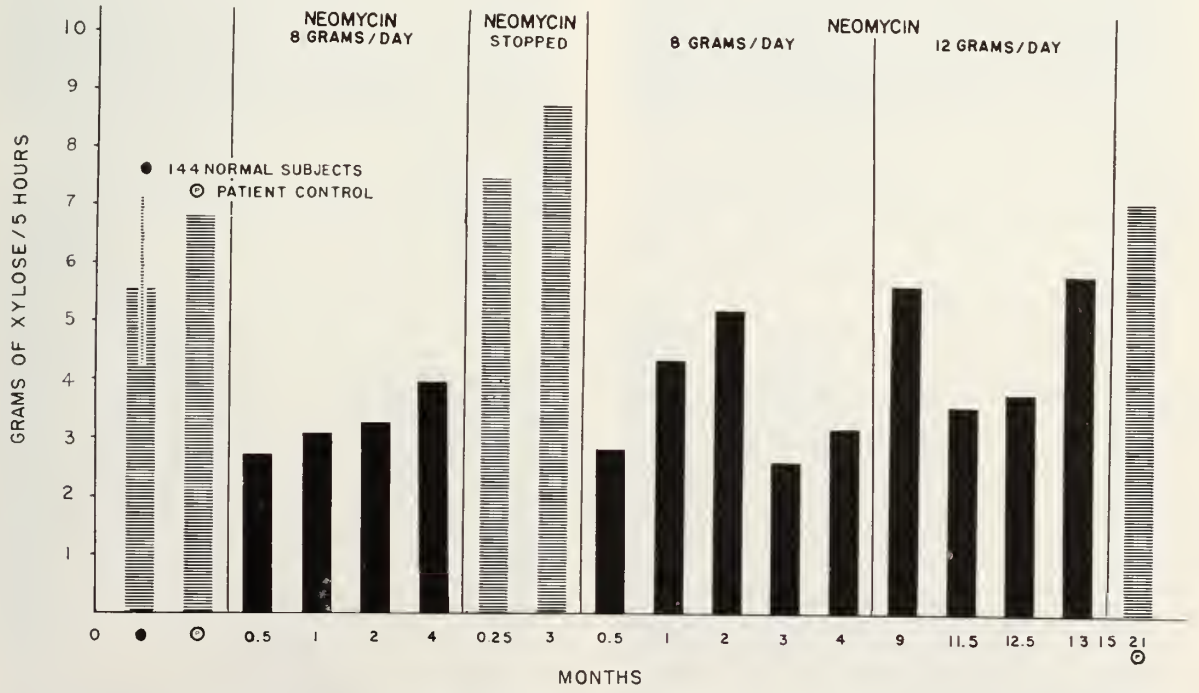
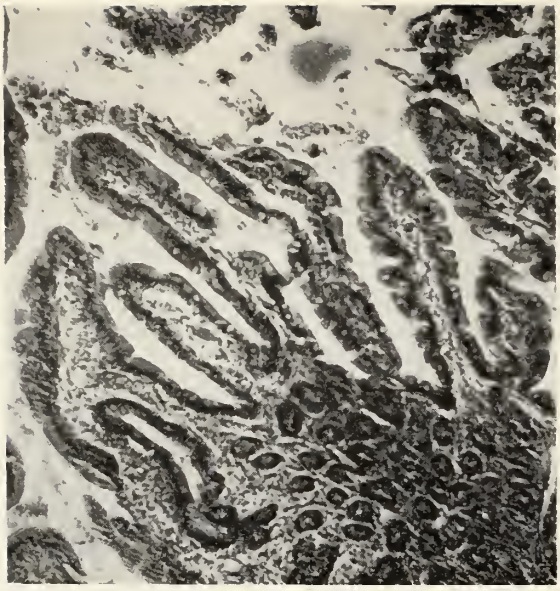
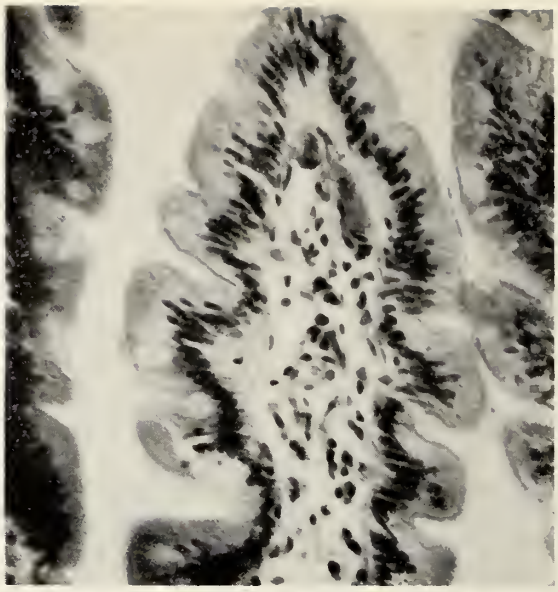


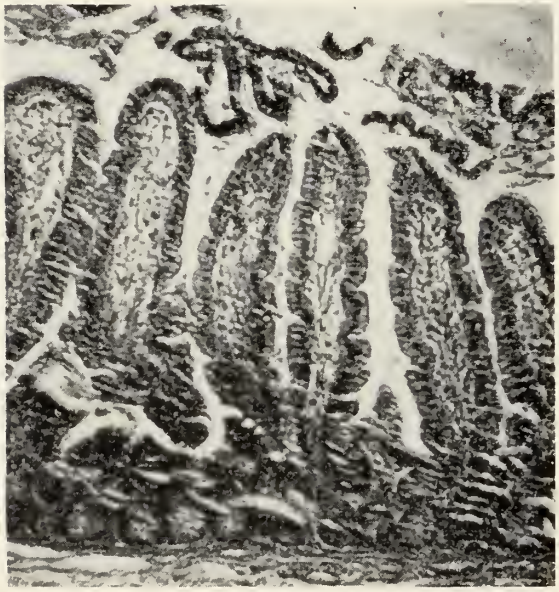
Fig. 2. Urinary xylose during neomycin therapy differs somewhat from control values but does not exhibit a pattern found in sprue.



A1



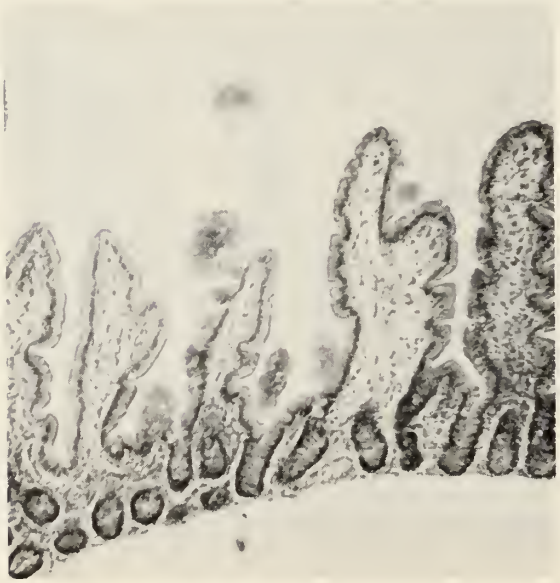
A2



B1



B2



C1



C2

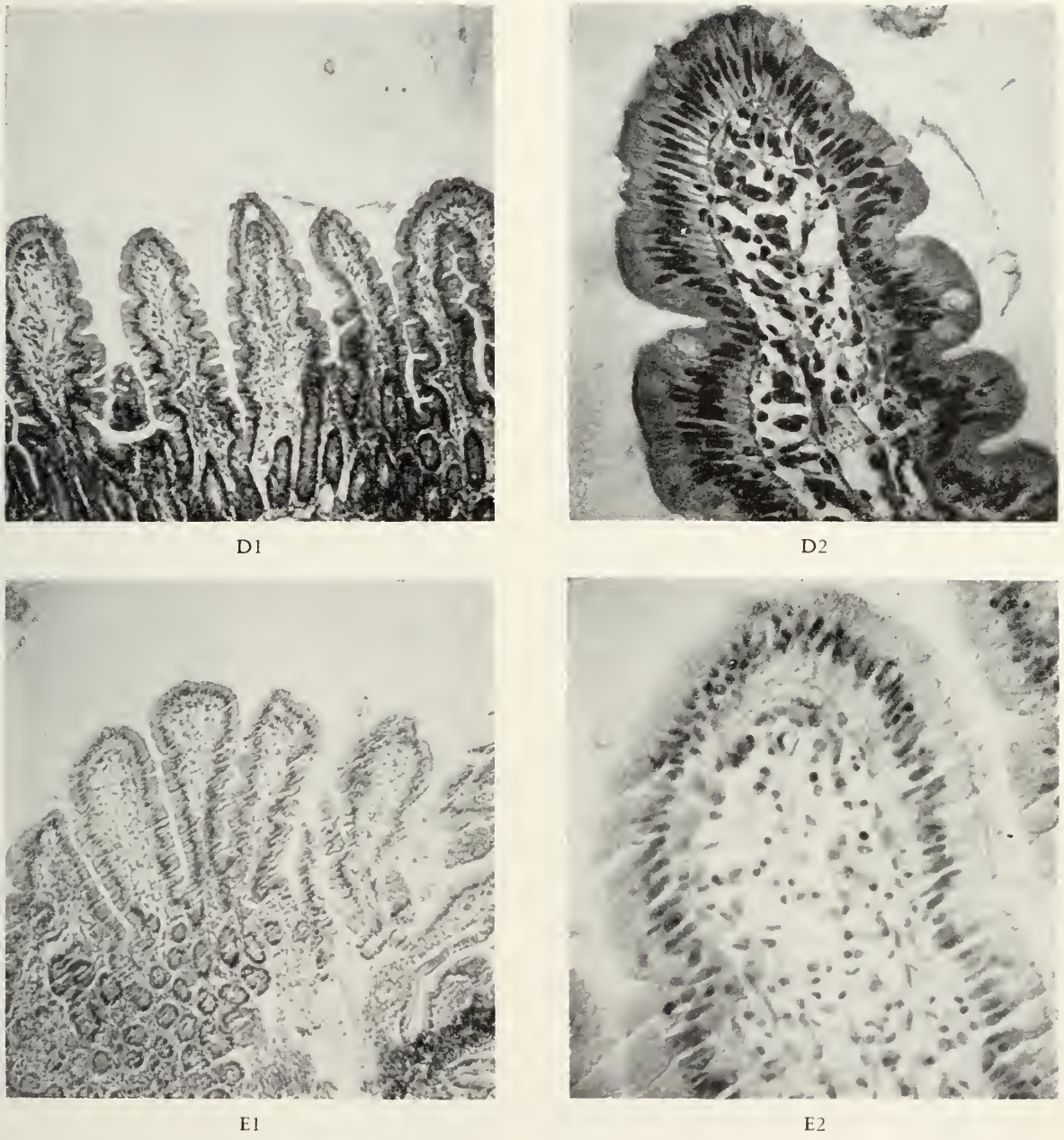


Fig. 3. Original magnification, low power (1) X 100; high power (2) X 430. A, Control; B, 2.5 weeks neomycin; C, 1 month neomycin; D, 4 months neomycin; E, 9 months neomycin. (See Table 1)

During the period of treatment, routine laboratory studies were done in addition to the determinations mentioned above. Hemograms and urinalyses were normal; BUNs, PSP, and electrophoretic patterns remained within normal limits. There was no significant alteration of the cholesterol levels although they tended to be lower during the treatment period with considerable variation. The exception to this was a rise well above the control level when treatment was stopped the first time. When neomycin was discontinued the second time, no sharp rise in cholesterol was noted. Vitamin B_{12} absorption estimated by the Schilling test was normal on three separate occasions during the treatment period. Oral glucose tolerance curves were flat both in the pre-treatment and post-treatment period. Intravenous glucose tolerance test was consistent with cirrhosis. Stools stained for fat were negative except at the very termination of the experiment. At this same time, a single stool fat study revealed 8.2 grams of total fat based on the wet weight analysis. The changing flora of the stools showed no correlation with time and dosage of neomycin.

Light microscopy of the jejunal mucosa did not reveal changes which at times have been attributed to neomycin administration such as clubbing of the villi, increased round cell infiltration, edema of the lamina propria, reduction in height of epithelial cells lining the villous tips, loss of nuclear polarity or increased phagocytosis in the villous tips. Instead, all sections were considered to be normal. (Fig. 3)

Electron microscopy in our case was done several years ago. In view of present day quality standards, critical evaluation of the total cell is not considered advisable. However, it can be stated that the brush border was well developed and intact.

Discussion

It has been amply documented in short-term experiments by other workers that the administration of oral neomycin is associated with altered intestinal absorption and steatorrhea. It is doubtful that the changes are gluten related. They seem to be related to intraluminal enzymatic and biochemical alterations and even intracellular enzyme deficiency. Whether or not biochemical and anatomical cellular integrity is involved has not been clear.

The data which we have gathered during long-term neomycin sulfate administration upon one patient do not answer questions of mechanism. They do suggest that long-term neomycin does not cause a sprue-like state measured clinically, by chylomicron estimation, by amino acid or even D-xylose absorption. Normal jejunal mucosa shown by light microscopy does not support the concept that neomycin administration causes acute damage to the bowel or might possibly cause chronic bowel damage. The presence of a normal cellular brush border demonstrated with electron microscopy at the end of 13 months of continuous neomycin therapy represents further evidence for the preservation of anatomical cellular integrity. It is recognized, however, that biochemical and enzyme alterations at this level may not be associated with anatomical changes.[21,22,24]

Within the limits of the experimental method, normal serum turbidity following an ingested fat meal suggests that there is no critical interference with intracellular triglyceride-lipoprotein synthesis or chylomicron formation.[16] Normal glycine absorption is also evidence for a normal or subcritical transport of this amino acid which is a brush border function. Variations in the xylose tolerance test are not explained. It did return to a normal range even under increased neomycin sulfate dosage. It is attractive to speculate that this may reflect subtle enzyme-sodium complex changes or even tolerance at the digestive absorptive surface in the absence of an anatomical defect in this area.

Neomycin should continue to be a useful tool in the more sophisticated studies relating to intraluminal digestion, intracellular transport mechanisms, and subcellular organization.

Addendum

Since submission of this paper for publication, Dobbins, *et al*,* using short term neomycin administration, have reported mucosal changes by light microscopy and crypt cell damage by electron microscopy. They suggest that neomycin adversely affects multiple enzyme systems both intra- and extra-cellularly.

Acknowledgments

1. We are indebted to the Upjohn Company for supplying neomycin sulfate as Mycifradin sulfate, 0.5 gm.
2. Biopsies for electron microscopy were obtained by Lansing Hoskins, M.D., formerly at the Mallory Institute of Pathology, Boston, Mass.
3. Electron microscopy was done through the kind cooperation of Leonard S. Gottlieb, M.D., Mallory Institute of Pathology, Boston, Mass.
4. Analysis of jejunal biopsies through the two-month interval using light microscopy was carried out blindly by William Thurlbeck, M.D., at the Massachusetts General Hospital, Boston, Mass.
5. Laboratory examinations were done in the Medical Research Laboratory under the direction of Victor C. Brum, Ph.D. The study was made possible through the interest and encouragement of Robert L. Ohler, M.D., Chief of Medicine.

*Dobbins, W. O., III, Herrero, B. A., and Mansbach, C. M.: Morphologic alterations associated with neomycin induced malabsorption, Am. J. Med. Sci. 255:63-77 (Jan.) 1968.

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The forty-seventh annual convention of the National Easter Seal Society for Crippled Children and Adults will be held in Boston, November 13-16, 1968. Sessions will be held in the Sheraton-Boston Hotel, Boston, Massachusetts. Leon Chatelain, Jr., Washington, D.C., president of the National Society, will preside. Thomas Teas, Mason City, Iowa, is convention chairman.

Learning in the Prenatal Organism: Fact or Fiction?

Victor X. Fongemie, M.A.*

Behavioral research at the embryonic level, until very recently, has been aimed primarily at studying the effects of teratological agents, manipulations of the embryonic environment, and extreme physical or emotional states in the pregnant female parent upon neonatal behavior and maturation.[11] The neonate so treated is usually tested on a variety of measures. Levels of general activity, emotional responsiveness to new environments, learning rates, body characteristics, etc., have been used as indicators of the prenatal treatment effects. Some meaningful correlations have been obtained between qualitative and quantitative properties of the prenatal treatments, embryonic age at which treatments are administered, and postnatal measures. Embryonic manipulations of this sort have generally produced neonates with behavioral or morphological deficiencies, or combinations of the two. Furthermore, these effects, more often than not, last throughout the life span of the individual.[11]

That prenatal stimulation without regard for embryonic functional sensory systems was thought the only meaningful approach may have been due to the fact that: (1) it is, technically, almost impossible to manipulate the embryo directly or have any control over stimulus conditions, as is true in most mammals; (2) it was of practical value to know what are the general effects of certain drugs and physical and emotional states of the pregnant female upon its progeny's development; and (3) it was generally believed that prenatal learning was impossible or of no consequence to later life.[7,8,12]

New Evidence of Prenatal Learning

That the late embryo is capable of responding to sensory stimuli has been known since the 1930s.[6,9] However, it was generally thought that such responses were usually reflexive in character, with no cognitive consequences. That is, that peripheral or sensory organ stimulation was not interpreted in any associative fashion by the embryonic central nervous system.

Conditioning in the human organism, for example, has been thought to be initiated somewhere between the tenth day and fifth month after birth,[8] with similar findings in the neonate rat,[1] the canine pup,[2] and in pigeons.[10] Earlier research on prenatal learning appeared to have shown that conditioning was possible in the last trimester of development,[7,9] but it was beset with serious methodological difficulties, so that few people accepted the results seriously.

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Learning in the embryonic organism has now been firmly established by a number of investigators. For example, Fried and Gluck[4] were able to condition 14-day-old chick embryos to a tone associated with shock. Definite GSR changes were obtained from 14 days on with no apparent differences between conditioning at this age and neonatal conditioning. A year later, Grier, Counter, and Shearrer[5] demonstrated auditory imprinting in 13-day chick embryos. After hatching these chicks consistently approached and followed the auditory stimuli to which they had been exposed during prenatal life. It is noteworthy that the imprinting training procedure is relatively simple. It requires no reinforcing stimulus, as in conditioning, for a neutral stimulus to acquire potential to elicit a response which it never did prior to training. A single exposure to a stimulus for a short period of time completes training. Prior to the Grier *et al* study, imprinting was thought to occur, exclusively, shortly after birth or hatching.

Dimond,[3] early this year, reported that photic stimulation prior to hatching had significant effects upon approach-avoidance responses in the neonate. Chicks incubated with light stimulation prior to hatching exhibited less approach behavior to a receding object, and active avoidance of a novel object, behavior that is normally observed only in imprinted chicks. The intensity and duration of these effects were positively correlated with the duration of prehatch photic stimulation. It would appear that stimulation experienced during the last trimester of embryonic development can come to stand in place of stimulation at a later stage. Dimond suggested that "many processes concerned with the development of perception may occur during the later period of embryonic development and not necessarily after the animal has hatched."

Discussion

Learning in the prenatal organism is now an established fact. Several important questions remain to be answered, however. The study of learning in the prenatal organism is a research area that is still in its descriptive stage of development.

To date, it has been shown that simple stimulus-response learning occurs and that more complex preceptual learning may occur. Furthermore, the data suggest that such learning occurs only during the last trimester of embryonic development, an important discovery, since it is at this time that sensory systems complete their development and become fully functional.

Continued on Page 141



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Side effects: Infrequent and minor side effects include nausea, metallic taste and furry tongue. Gastrointestinal disturbances, flushing and headache sometimes occur, especially with concomitant ingestion of alcohol. The taste of alcoholic beverages may be altered. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness or paresthesia of an extremity, joint pains, confusion, irritability, weakness, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

Dosage and Administration: In women: one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.

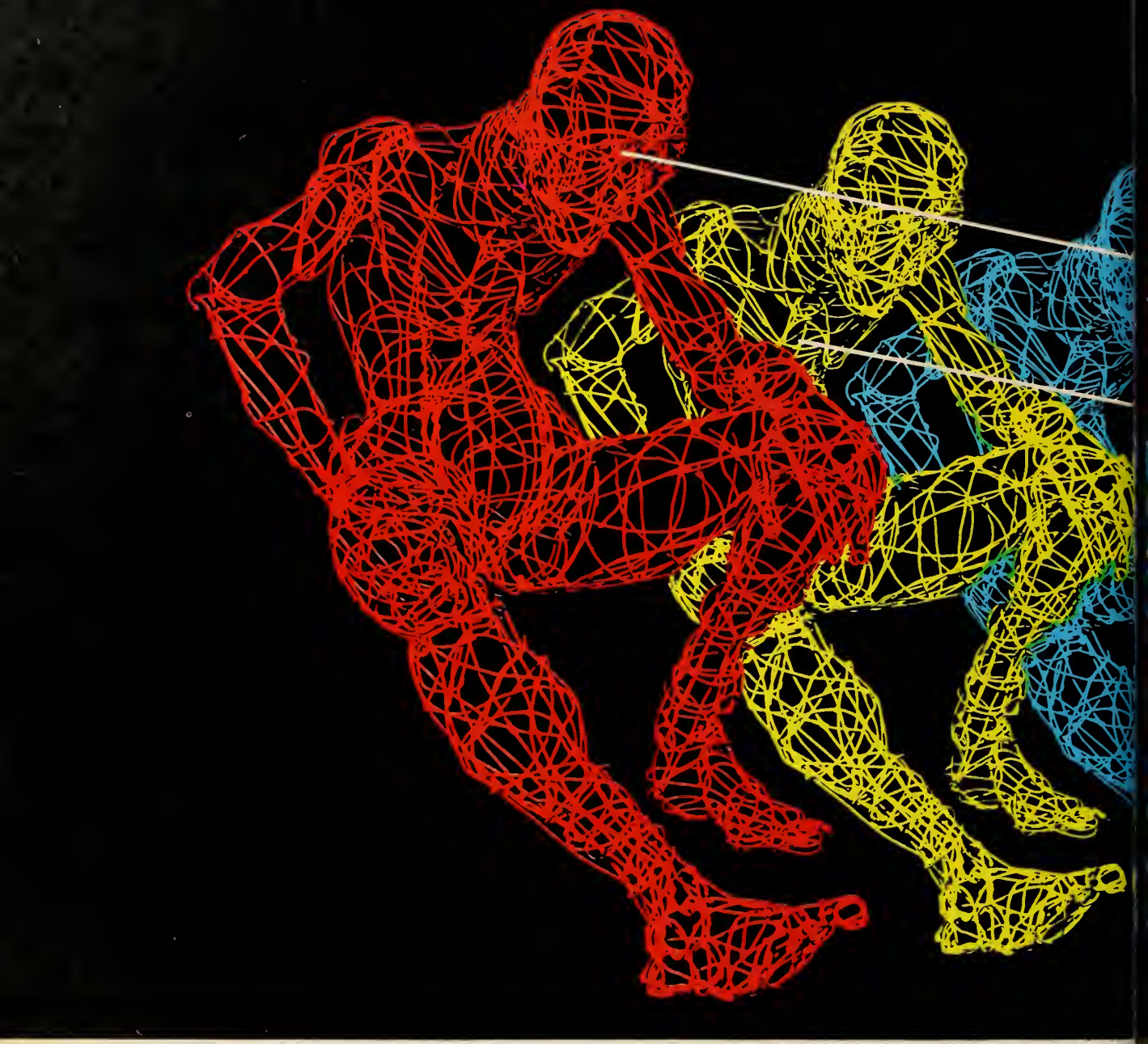
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scorbic Acid (Vitamin C)	75	mg.
olic Acid	1	mg.

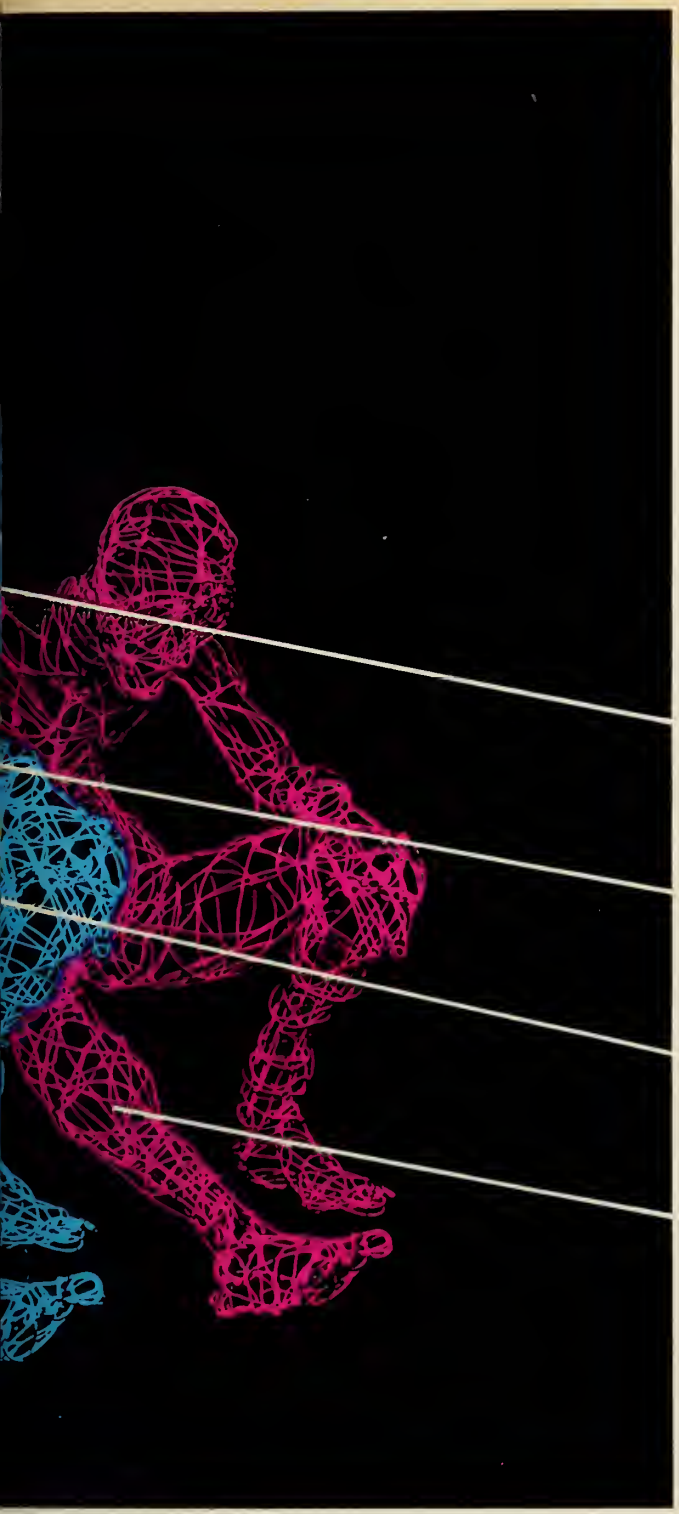
ndications: Trinsicon® (hematinic concentrate with intrinsic factor, Lilly) is a multifactor preparation effective in the treatment f anemias that respond to oral hematinics, including pernicious nemia and other megaloblastic anemias and also iron-deficiency nemia.

Contraindications: Hemochromatosis and hemosiderosis.

Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

In pernicious anemia, the use of folic acid without adequate vitamin B_{12} therapy may result in hematologic remission but neu rological progression. Adequate doses of vitamin B_{12} (parenteral or oral with potent intrinsic factor as in Trinsicon® [hematinic concentrate with intrinsic factor, Lilly]) usually prevent, halt, o improve the neurological changes.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentia tion of absorption of physiological doses of vitamin B_{12}. If resist ance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary. No single regi men fits all cases, and the status of the patient observed ir follow-up is the final criterion for adequacy of therapy. Periodic



You can treat combined deficiencies with

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- Vitamin B_{12} plus intrinsic factor (15 mc B_{12} activity)—helps provide adequat levels of this important vitamin.
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- Ascorbic acid (75 mg.)—augments th conversion of folic acid to its active for and helps iron absorption.
- Iron (110 mg.)—treats hypochromi anemia.

clinical and laboratory studies are considered essential and are recommended.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastro-intestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects.

In extremely rare instances, skin rash suggesting allergy has followed oral administration of liver-stomach material. Instances of apparent allergic sensitization have also been reported after oral administration of folic acid.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500. [032568]

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Mylanta helps relieve ulcer pain with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

will it help "my gassy stomach"?

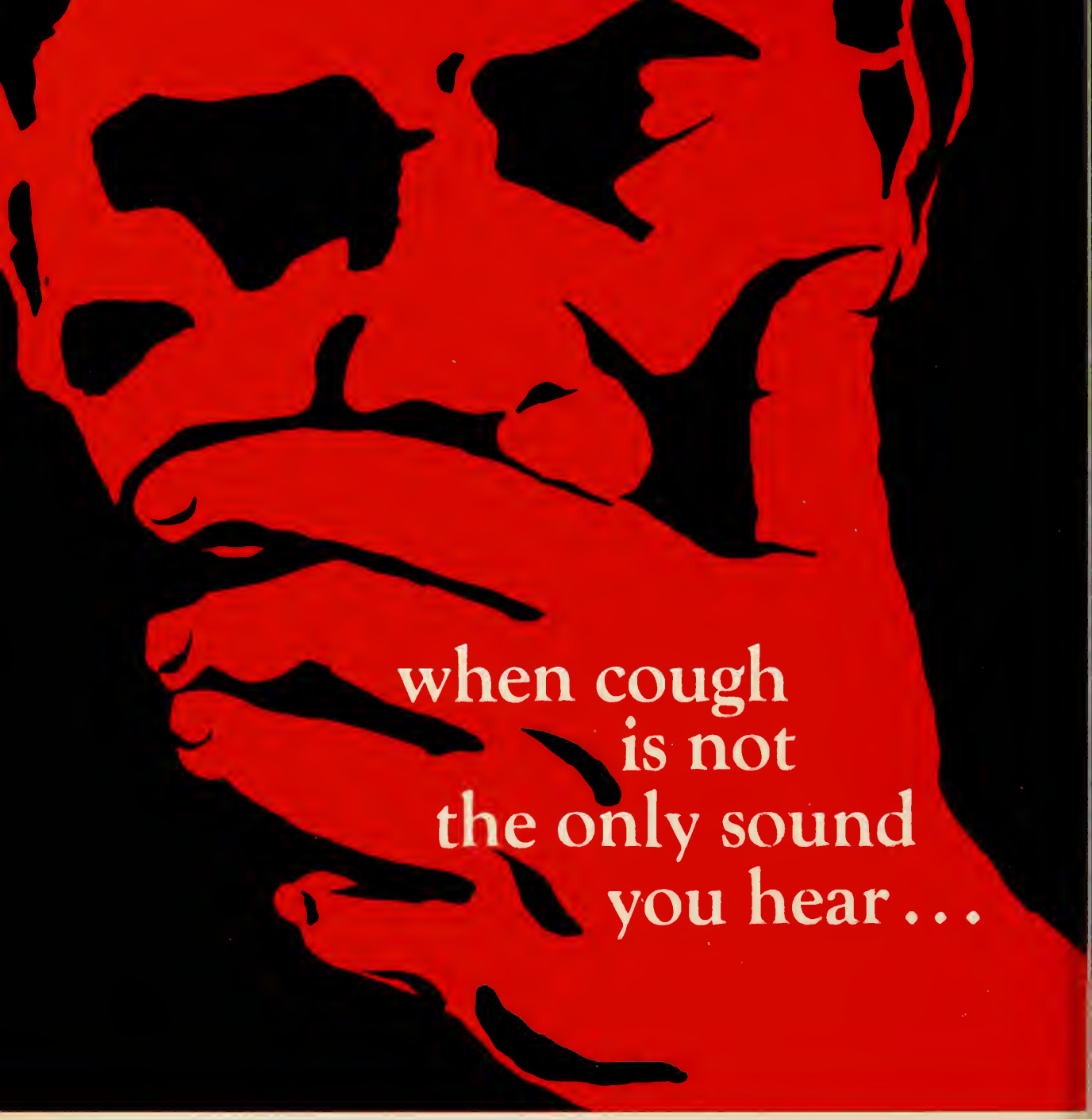
Mylanta *also* contains simethicone: for concomitant relief of G.I. gas distress.

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The *prolonged* acceptance of Mylanta was recently confirmed in 87.5% of 104 patients—after a total of 20,459 documented days of therapy.* *Danhof, I. E.: Report on file.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. *Dosage:* One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

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The therapeutic usefulness of Omni-Tuss is enhanced by a unique resin complex formulation providing the clinically desirable advantages of: (1) uniform drug availability throughout an extended period, (2) 8 to 12 hours of symptomatic control, (3) minimal dosage requirement, (4) minimal side effects.

Economical, efficient **b.i.d.** dosage—extremely well-tolerated by children, 6-12, and adults.

'Omni Tuss' Suspension: Each teaspoonful (5 cc.) contains 10 mg. codeine (Warning: May be habit-forming), 5 mg. phenyltoloxamine, 3 mg. chlorpheniramine, 25 mg. ephedrine, all as cation exchange resin complexes of sulfonated polystyrene, and 20 mg. guaiacol carbonate.

Available on prescription only. Class X exempt narcotic. Permissible on oral prescription.

Dosage: *Adults:* 1 teaspoonful (5 cc.) q12h.
Children (6-12 *years*)*:* ½ teaspoonful q12h.

Side Effects: Minimal, but when encountered may include jitteriness, nausea, drying of mouth, insomnia, constipation, which disappear upon adjustment of the dose or discontinuance of treatment.

Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

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However, little is known about stimulus effects when intensive and qualitative properties of these stimuli are varied independently of each other. Are the effects limited to specific behaviors, or do they affect the gross behavioral adaptive potential of the organism? Dimond suggested that the organism may respond to his environment in a manner that is positively correlated with the level of stimulation it experienced in its embryonic environment. That is to say, optimal levels of stimulus input sought by an organism may be determined by the levels of prenatal stimulation. Another effect may be that prenatal learning has much the same function as that of learning seen in older organisms. It may predispose the organism to respond in a specific fashion, which is another way of saying that transfer of learning occurs. From this viewpoint, the importance of prenatal experience is, that it serves as the organizer of perception. Such a phenomenon is known in psychology as perceptual learning.

Summary

Methods and effects of prenatal treatments upon neonatal and later life of organisms have been briefly reviewed. It was pointed out that until recent years most research in the area was concerned with studying the effects of stimuli other than those directly related to functional perceptual systems.

Recent research on sensory perception and learning in the late embryo has shown that prenatal learning and perception occur, and suggests that they may have important effects upon later life. The nature of these effects remain largely to be investigated.

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ANNUAL OTOLARYNGOLOGIC ASSEMBLY

The Annual Otolaryngologic Assembly of 1968, will be held October 12 through 18, 1968, in the Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the College of Medicine of the University of Illinois offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to specialists current information in medical and surgical otorhinolaryngology.

A separate, but correlated course entitled "Head and Neck Radiology Conference" under the guidance of Doctor Galdino E. Valvassori, will be conducted by the Department of Radiology for two full days just preceding the ASSEMBLY, Thursday and Friday, October 10 and 11, 1968.

Interested physicians should direct communications to the mailing address: Department of Otolaryngology, P. O. Box 6998, Chicago, Illinois 60680.

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

A Perspective of Comprehensive Health Planning

HARRY ALLEN, M.D.*

With the possible exception of the Vietnam war and civil disorders, no social problem facing the American people today is more complex and yet more challenging than the recently enacted health legislation. We are currently on the crest of a "Tidal Wave of Expectancy" concerning improvement in both distribution and quality of medical care.

The Social Security Amendments of *1965* were of major interest and have been predicted to have an impact on total medical care equivalent to the discovery of penicillin. The implementation of this legislation has provided financial assistance to the over 65 population in meeting the cost of medical care. In spite of the problem of rising costs, shortages of personnel and shortages of hospital and nursing home beds, more of our older citizens are receiving quality care than ever before. However, Medicare is only one part of a series of fundamental changes occurring in concept, administration and delivery of comprehensive health services in this country.

In order to understand the background of the Partnership of Health Legislation, it may be helpful to identify some of the problems. It would certainly be an understatement to say that the traditional Federal-State-Local relations have been adequate to meet the new dimensions in public health. There has been increasing dominance of the health scene at the Federal level with concurrent demand that the States assume new functions and responsibilities. This has placed the State and Local Health Departments at the crossroads of their very existence as functioning, dynamic units in the health care of our citizens.

The following factors are contributory to this situation:

1. Congressional support of Health Legislation.
2. Inadequate legislative support at the State Level.
3. The categorical grant system.
4. "Horizontal Programming" on the Federal Level.

Federal Health Dollar – The budget for HEW is now second only to the Department of Defense, and is closely tied in with every State and almost every community. The total health program has had the continued enthusiastic support of Congress. During the past five years more money has been available for professional education, research, environmental health, public health and related programs than at any other time in history. The new Legislation implies a national declaration to provide top quality health care in an optimum environment that is available to everyone, in every State and every neighborhood.

Inadequate State Legislative Support – The national mandate has placed the States in a critical situation since the Federal demands have *not* been accompanied by increasing legislative appropriations to employ the necessary staff to develop new programs. The majority of State Legislatures appear reluctant to increase support for health programs. The State Health Agencies have been thrust into the medical care business and can become a major force for the promotion of quality medical care. Implementing the legislation requires additional fully trained professional staffs at the State and local level, and the development of an adequate wage scale to recruit them.

Categorical Grants – Over the past several years, new Federal grants earmarked for Heart, Cancer, Chronic Illness and Aging, Mental Retardation, Home Health Services, etc., have been made available. This categorical system had as a basis the experience with communicable disease, and constitutes a system based on the past tradition of public health. It is obvious to all of us in this grant business that a *different approach is needed to effectively deal with the dominant health problems of today*. Comprehensive programming includes all services ranging from prevention, diagnosis, treatment and rehabilitation and cuts across several traditional operational programs in the usual State and local Health Department. An expanded base is essential for mounting effective programs, at both the Federal and State and local levels. A major result of the categorical grant program is *costly fragmentation and duplication.*

Horizontal Programming – It is becoming increasingly apparent that *Health programs are no longer the specific*

* Andover, Massachusetts.

domain of a single established unit in the Bureaucratic structure. Many new programs and grants relating to health are being initiated by other agencies, some even in competition with existing grant programs. Examples of these are Office of Economic Opportunity, Administration on Aging, a part of S.R.S., Department of Labor, Department of Education, Children's Bureau, Space Administration, Housing and Urban Development, as well as the National Institutes of Health within the Public Health Service. These organizations have directed their efforts toward a multiplicity of agencies at both the State and local levels. This lack of coordination has resulted in some confusion, but fortunately not chaos. However, in terms of health benefits *"the sum is not equal to the parts."*

Part II – Partial Solutions – The problems posed did not go unrecognized and four well known pieces of Federal legislation provided partial solutions. These include:

1. Hill-Burton Act.
2. Mental Health and Mental Retardation Planning.
3. Regional Medical Programs (PL 89-239).
4. The Partnership for Health (PL 89-749).

The Hill-Burton Act has made a significant impact on the health of the nation especially the *rural areas* by the construction of hospital facilities. A part of the Act, Section 318, also included grants for areawide hospital planning. The success of this planning for facilities varied, however the need became increasingly critical with rising costs and shortages of personnel. Rochester, New York has one of the better planning councils.

As you probably know, the Mental Retardation Legislation, passed in 1964, had the Kennedy Family's backing as the driving force. The most significant aspect of this program was the entirely new approach to community planning for health programs. This is now referred to as the *"Umbrella Concept."* Basic to the concept is:

1. Single agency designation by the Governor as the sole agency for carrying out the required program planning.
2. Involvement of all agencies, including the Health Department, mental health agencies, medical schools, other public and private organizations, and representatives of the *consumers* in the planning process.
3. Development of comprehensive State and areawide health services, including manpower and facilities.

Mental Retardation Program planning posed a challenge for the Health Departments as well as the Federal agencies to work together. This was not accomplished without a degree of frustration by many persons accustomed to implementing programs through established channels. However, *the critical need for strengthening the planning process and developing coordinated, meaningful health-action systems was long over-due.*

The Mental Retardation program was but another indication that comprehensive multi-agency planning was the new approach to meeting current and emerging health service needs. It is also the philosophy of the new legislation passed within the past few months.

The Regional Medical Programs (PL 89-239) also put the traditional public health administrators in the role of working and planning with medical schools and private medical practitioners. Several States have widened their horizons and have seen the tremendous opportunity afforded in adapting to the current trends as indicated by the new health legislation.

All six New England States are involved in planning for regional programs. The administration of the program at the Federal level is built around the concept of local determination with no Federal dictation or standard operational blueprints. It is hoped that the funds will be used to provide the framework or structure for bringing together all activities relating to heart disease, cancer and stroke. At the same time, there is no intention of duplicating existing grant programs for research and community demonstrations.

Specifically stated, "the goal is to utilize the new funds to create a better environment for *training, research* and *education."* It provides support for pilot studies and planning grants in the following areas:

1. Demonstrations of patient care.
2. Continuing education – Postgraduate Training Programs.
3. Training programs for paramedical personnel in use of new equipment.
4. Fighting professional obsolescence.
5. Establishing referral programs.
6. Support of staff personnel to supervise training programs.
7. Establishment of communications networks.
8. Bringing community hospitals into the mainlines of Modern Medicine.

Discussion on PL 89 – 749 – The Partnership for Health legislation has been developed as a new potential for Planning and Improving Services to People. The concept is not capable of producing *instant miracles* nor is it the *menace* that some groups thought. The problems described are great and comprehensive planning for health becomes a necessary and promising approach to the enormous challenges that confront us. There is general accord with the principle that we can no longer afford the luxury of uncoordinated effort. It is too expensive in terms of money and personnel and it does not provide for an adequate quality of care. As an example, in Massachusetts there are currently 170 certified Home Health Agencies.

It would seem desirable to present the various points of the Act:

Part A – Statewide Planning – This follows the "Umbrella Concept" previously described in that it sets up a single state agency to be responsible for planning; requires that the plan be comprehensive in nature and establishes an Advisory body over 50% of which are consumers. All six New England States are in the process of planning; however, only three have approved plans.

Progress has been made but the pace has been careful.

Part B – Areawide Planning – The law permits grants for areawide comprehensive health planning to any public or non-profit agency other than the designated State Planning Agency. The *1967 amendments* added the requirement for appropriate representation of the interests of *local government* where the grant recipient is not a local governmental agency. The Part B grants are being submitted by many agencies including existing hospital planning councils who are modifying their organization to qualify. Whatever the organization it must provide assurance that it can achieve a consensus among the providers of health services as well as the consumers. It must be a true partnership and the consumers are no longer to be *silent partners.*

Part C – Training Planners – It is generally accepted that there are few persons trained to plan along the methodology required. The Act therefore makes provision for universities to develop curriculum for training planners. Grants are provided on a competitive basis.

Part D – Block Grants to State Health and Mental Health Agencies – The Act effectively eliminates the categorical grant system and hopefully will make for more effective use of available Public Health Service funds by the State agencies. It provides for Block Grants to the Health and Mental Health Departments and gives the Health Department the needed flexibility to plan for utilization of the funds. It requires that each program director reevaluate existing services, and develop new impact programs to compete for operational money. This is creating problems for those programs previously supported by categorical grants and is viewed as an opportunity by the less fortunate units.

An additional facet of this grant was the development of an approvable State Plan which must be in accordance with the Part A – Statewide Comprehensive Health Plan. The State Health Department is now but one representative for health program development in a given state.

The approval and review of Parts A, B, and D grants was delegated by the Surgeon General to the Regional Health Director; to assist the Regional Health Director there was established a Regional Health Advisory Committee. This was a further step in getting the decision level closer to the people.

Part E – Part E provides project grants to non-profit agencies, including universities, for the support of a wide gamut of health services. This included all programs with project grant authority such as cancer, heart, neurological and sensory, v.d., and tuberculosis. All monies from the previous authorities were combined and are now available on a competitive basis. Unfortunately, the commitments and demands on this fund was so great, that it is already depleted for the current fiscal year. However, the establishment of a single grant system rather than the multiple systems was welcomed.

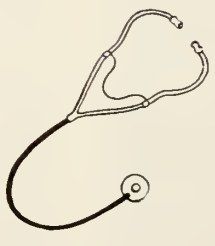
To further the decentralization process, the Regional Health Director has been given the authority to approve or disapprove these applications. Representatives of the six New England States sit on the Ad Hoc Study Group which assists the Regional Health Director in the review process. The application must also be in accordance with the State Plan for Comprehensive Planning – Part A.

Part F – Part F is related to interchanges of personnel between Federal, State and Local agencies. To my knowledge this provision has not been implemented in New England.

Summary

In summary, the Partnership for Health legislation is a challenge and an opportunity. In my opinion, too much time is currently being spent with the mechanics of the planning process, and little is being done to achieve the prime objective of "improving services to people." However, the need for comprehensive health planning is nationwide. It is essential that every community and state begin to think and plan in these terms. The problems are imposing but the rewards will be significant in the following areas:

(a) Increased quantity of health services.
(b) Improved quality of health services.
(c) Better access and delivery systems.
(d) Increased availability of manpower.
(e) Improved data systems.



Maine Medical Association

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Across The Desk

Massachusetts Abandons "Locality" Rule

A patient was awarded a new trial against an anesthesiologist for allegedly negligent administration of a spinal anesthetic during childbirth. The Supreme Judicial Court of Massachusetts ruled that the trial court erred in using the "locality" rule for determining negligence, because that rule is unsuited to modern conditions. However, the trial court was correct in refusing to instruct the jury that the anesthesiologist's failure to follow the instructions in the manufacturer's brochure as to the anesthetic's use was evidence of negligence.

The childbirth occurred in New Bedford. During the delivery, the anesthesiologist, who practiced in that city, administered a spinal anesthetic containing 8 mg of pontocaine in 1 cc of 10 per cent solution of glucose. When the patient attempted to get out of bed eleven hours later, she slipped and fell on the floor. She subsequently complained of numbness and weakness in her left leg, a condition which still existed at the time of the trial.

There was substantial medical evidence that the patient's condition was the result of an excessive dosage of pontocaine and that good medical practice required a dosage of 5 mg or less. There was also medical evidence that a dosage of 8 mg was proper and that this dosage was customary in New Bedford in a case, as here, of vaginal delivery. The anesthesiologist testified that such variations as there were in the dosages administered in Boston and New York, as compared with New Bedford, were due to differences in obstetrical technique.

The jury was instructed that the anesthesiologist was required to measure up to the standard of professional care and skill ordinarily possessed by others in his profession in New Bedford, having regard to the current state of advance of the profession.

The instruction was based on the "locality" rule, which was first enunciated almost 90 years ago in *Small v. Howard,* 128 Mass. 131. The rationale of the rule was that a physician in a small or rural community lacked opportunities to keep abreast with advances in the profession and would not have the most modern facilities for treating his patient. The court expressly overruled *Small v. Howard,* stating that the present case demonstrates the inappropriateness of the "locality" rule to present day conditions. New Bedford, a city of 100,000, is slightly more than 50 miles from Boston, one of the medical centers of the nation, if not the world. This is a far cry from the situation present in *Small v. Howard.* Yet the jury was told that if the skill and ability of New Bedford physicians were 50 per cent inferior to those of Boston physicians, the anesthesiologist should be judged by New Bedford standards. This was a *reductio ad absurdum* of the "locality" rule, the court said.

The proper standard is whether the physician, if a general practitioner, has exercised the skill and care of the average qualified practitioner, taking into account the advances in the profession. The specialist should be held to the standard of skill and care of the average member of the profession practicing in the specialty, taking into account the advances in the profession. In both cases, the medical resources available is one circumstance to be considered in determining the skill and care required.

The anesthesiologist testified that he was familiar with the brochure by the manufacturer of pontocaine which recommended the use of 2 mg to 5 mg for a vaginal delivery. There was medical evidence that it was good practice to follow the manufacturer's recommendations as to dosages for spinal anesthetics. However, there was also medical testimony that the recommendations in the brochure were intended as a guide to physicians, not to anesthesiologists. Since the statement in the brochure was only a recommendation and there was conflicting medical testimony as to whether the failure to follow it was improper practice, the trial court was correct in refusing to instruct the jury that the anesthesiologist's failure to follow the manufacturer's instructions was evidence of negligence. *Brune v. Belinkoff,* 235 N.E. 2d 793 (Mass., April 3, 1968) — The Citation, Vol. 17, No. 5.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Coxsackie Virus Infections and Heart Disease

The causative factors of most congenital anomalies remain unknown in spite of voluminous literature published on the subject during the last three decades. The relatively large number of known determinants of abnormalities, such as genetic factors, chromosomal aberrations, endocrine disturbances, drugs and chemicals, radiation, physical injury, malnutrition, and infection, although well documented, leave more than 50 per cent of anomalous births unexplained. . . . One of the most frequently encountered abnormal conditions of the infant is congenital heart disease. This defect has been observed to occur approximately six times in every 1,000 live births. . . . The causes of malformations of the heart remain essentially unknown. The relative role of hereditary and environmental factors has been subject to considerable investigation in recent years, but, with the exception of rubella virus, genetic factors, and recessive inheritance, little is known of the etiology of this condition. Furthermore, except for epidemic years, only about 2 per cent of the malformations of the heart have been shown to be caused by rubella infections.

Other viruses, and Coxsackie viruses in particular, represent logical targets for incrimination as teratogenic agents. The affinity of these infectious agents for heart tissue has become increasingly well documented in recent years. . . .

. . . Many infants with neonatal myocarditis appear to have acquired the infection during the intrauterine period and, significantly, their mothers characteristically showed no more than mild illness or completely subclinical infection.

. . . Over 10,000 pregnant women were studied prospectively, and paired sera of mothers of anomalous infants together with matched specimens from mothers of normal children were tested for serologic evidence of infection with various viruses during pregnancy. A significantly greater incidence of infection with Coxsackie group B and type A9 viruses was observed in mothers of infants with congenital heart disease than in their matched controls. . . . The greater frequency of maternal infection associated with abnormal infants was observed regardless of the severity of the condition . . . although infections with other viruses were detected, their occurrence was essentially the same in both the anomaly and the control groups.

Final proof of the incidence of congenital heart disease induced by Coxsackie virus must await extended and additional serologic studies as well as virologic evidence through isolation or visualization in affected heart tissue. In the meantime the pursuit of studies such as described . . . constitutes an exciting approach to the solution of a difficult and important problem.

Submitted by Jacob B. Dana, M.D., Maine Heart Association.

Reference: Brown Gordon C., Sc.D., Editorial, American Heart Journal, Vol. 75 pages 145-146, 1968.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Anti-Cigarette Spot Announcements Distributed to T.V. Stations

NEW YORK, N.Y. — Based on an unusual level of off-beat sophistication, appealing to adults and teen-agers alike, two new, full-color anti-cigarette spot announcements have been produced for the American Cancer Society by Lord, Geller, Federico and Partners, Inc., New York advertising agency.

Both announcements were filmed entirely in New York City. The first, titled "Showdown," displays a typical good guy versus the bad guys in an about-to-shoot-it-out-in-a-saloon situation. However, good guy walks out unharmed as the bad guys, smokers all, are simultaneously struck by coughing fits. Punch line at end, spoken by announcer is, "Cigarettes. They're killers."

"Happy People," title of the second announcement, resembles a typical cigarette commercial, revealing an attractive couple and their attractive friends doing their usual enjoyable things — skiing, dancing, romancing, while puffing away to the music background of Jerome Kern's familiar "Smoke Gets In Your Eyes." However, what distinguishes this Cancer Society announcement from the ordinary cigarette commercial is the message contained in the announcer's voice over. He is matter-of-factly reciting the perils of smoking: tar, emphysema, lung cancer, heart disorders, etc. He concludes by asking the question "So, why are these people laughing?"

Each of the announcements has been produced in 60 and 30-second versions. The voice over in both is by Lee Stevens. Motion Associates East handled production duties, with Paul Morgan serving as producer and Jack Horton as director. Dick Lord, writer of "Showdown," and Arthur Einstein, writer of "Happy People," each served as agency co-producer with Gene Federico on the film they scripted.

The idea, the script and storyline of both spots were created by the agency as a public service for the Cancer Society.

"Showdown" and "Happy People" will be distributed to television stations around the country by the American Cancer Society.

American Cancer Society News Service Release

Continued from Page 145

M.M.A. STANDING COMMITTEES — 1968-1969

Members of the Advisory Committee to the Health Insurance Committee

Maine Society of Anesthesiology – Clement S. Dwyer, M.D., 205 French St., Bangor

Maine Chapter, American Academy of General Practice – John D. Denison, M.D., 105 Brunswick Ave., Gardiner

Maine Society of Obstetrics and Gynecology – E. Allan McLean, M.D., 29 Deering St., Portland

Maine Chapter, American Academy of Pediatrics – Everett A. Orbeton, M.D., 131 Chadwick St., Portland

Maine Society of Internal Medicine (Includes Medical Specialty Group) – Albert Aranson, M.D., Maine Medical Ctr., Portland

Section on Ophthalmology of the M.M.A. – Jay K. Osler, M.D., 74 Birch St., Bangor

Maine Radiological Society – John F. Gibbons, M.D., 22 Bramhall St., Portland

Maine Chapter, American College of Surgeons – John F. Reynolds, M.D., 216 Main St., Waterville

Ear, Nose and Throat Group – Loring W. Pratt, M.D., 177 Main St., Waterville

Maine Society of Pathologists – Franklin F. Ferguson, M.D., 22 Bramhall St., Portland

Neurology and Neurosurgery Group – Daniel A. Rock, M.D., 477 Main St., Lewiston

Maine Trauma Committee – Frank B. Bull, M.D., 5 Hasson St., Hallowell

Veterans Affairs Committee – Harry B. Eisberg, M.D., 357 Elm St., Biddeford

Delegate and Alternate Delegate to A.M.A.

(January 1, 1969 to January 1, 1971

Delegate – George W. Wood, III, M.D., 156 No. Main St., Brewer

Alternate Delegate – Richard P. Laney, M.D., 50 Water St., Skowhegan

To fight TB-find it first!

Make tuberculin testing routine with every physical examination.



TUBERCULIN,TINE TEST (Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

Lederle

330—8/6135

County Society Notes

HANCOCK

A meeting of the Hancock County Medical Society was held at the Seawall Restaurant in Southwest Harbor, Maine on May 7, 1968 with eighteen members and four guests present.

After a brief business meeting, Dr. Gordon S. Myers, an internist from the Massachusetts General Hospital staff, discussed coronary heart disease and angina pectoris versus myocardial infarctions, their diagnosis and treatment. Following an interesting and enlightening discussion there was a brief question and answer period.

BRADLEY E. BROWNLOW, M.D., *Secretary*

YORK

The York County Medical Society met at the Notre Dame Hospital in Biddeford, Maine on May 8, 1968 with twenty members and one guest present.

Following a social hour and dinner, the meeting was called to order by the Vice-president, Marion K. Moulton, M.D.

Donald E. Troop, M.D. of Milbridge, Maine was elected to membership.

It was voted to spend more time to social and political discussions at future meetings.

Charles R. Glassmire, M.D., Councilor for the First District of the Maine Medical Association, was introduced and gave a very fine talk and answered many questions from the floor. Drs. Paul S. Hill, Jr. and Carl E. Richards talked about State association matters.

CHARLES W. KINGHORN, M.D., *Secretary*

AROOSTOOK

A meeting of the Aroostook County Medical Society was held on June 2, 1968.

Drs. Lewis E. Nolan and Denis R. Mazerolle of Caribou were elected to membership.

The following officers were elected for the ensuing year:

President, Gordon N. Johnson, M.D., Houlton

Vice-President, I. Mead Hayward, M.D., Caribou

Secretary, George J. Harrison, M.D., Houlton

Treasurer, Clyde I. Swett, M.D., Island Falls

Delegate to the Maine Medical Association House of Delegates, Melvin R. Aungst, M.D., Fort Kent. Alternate: William A. O'Brien, M.D., Presque Isle

Board of Censors, John B. Madigan, M.D., Houlton

GEORGE J. HARRISON, M.D., *Secretary*

WASHINGTON

The regular meeting of the Washington County Medical Society was held on June 28, 1968 at the Dennys River Inn, Dennysville, Maine with six members and guests present.

The only subject brought up for discussion at the meeting was the "Maternal and Infant Care" Program. This was discussed with considerable detail by Dr. Thompkins of the Children's Bureau of Washington, D.C. Dr. Thompkins felt that such a program could be well set up in the County with the local physicians aided by Parent, Medical personnel, including Social workers, Nutritionists, and Secretaries and what other personnel that might be necessary. All patients in the low income group would be eligible for care in the clinics with the high risk cases eligible for hospitalization. Dr. Robert G. MacBride, Lubec, Maine agreed to act as the Obstetrical consultant. Dr. James C. Bates, Eastport, Maine agreed to act as Pediatric consultant in order to facilitate starting of the plan. The Doctors felt that such a plan would be feasible and could be started in the near future.

KARL V. LARSON, M.D., *Secretary*

News and Notes

Department of Health and Welfare
Division of Maternal and Child Health
Including Services for Crippled Children

(By Appointment Only)

Orthopedic Clinics

Augusta – Augusta General Hospital
1:00 p.m.: Aug. 15
Bangor – St. Joseph Hospital
9:00 a.m. and 1:00 p.m.: Jul. 25, Sept. 26
Half-day sessions: 1:00 p.m.: Aug. 22
Fort Fairfield – Community General Hospital
9:00 a.m. and 12:30 p.m.: Sept. 9
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Sept. 10
Houlton – Aroostook General Hospital
9:00 a.m.: Sept. 12
Lewiston – Central Maine General Hospital
9:00 a.m. and Bracing Clinic at 12:30 p.m. (In conjunction with CMGH): Jul. 19, Aug. 16, Sept. 20
Machias – Down East Community Hospital
9:00 a.m.: Jul. 26
Portland – Maine Medical Center
10:30 a.m. (In conjunction with MMC): Every Monday, (holidays excepted)
Presque Isle – Arthur R. Gould Memorial Hospital
9:00 a.m. and 12:30 p.m.: Sept. 11
Waterville – Thayer Hospital
9:00 a.m.: Jul. 24, Aug. 28, Sept. 25

Cardiac Clinics

Bangor – St. Joseph Hospital
9:00 a.m.: Jul. 26, Aug. 9, 23, Sept. 13, 27
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Friday, (holidays excepted)

Cleft Palate Evaluation Clinic

Portland – Maine Medical Center
10:00 a.m.: Sept. 10

Pediatric Clinics

Bangor – St. Joseph Hospital
1:30 p.m.: Jul. 26, Aug. 23, Sept. 27
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Jul. 24
Houlton – Madigan Memorial Hospital
1:30 p.m.: Aug. 14
Presque Isle – Arthur R. Gould Memorial Hospital
1:30 p.m.: Sept. 25
Waterville – Thayer Hospital
9:00 a.m.: Aug. 14, Sept. 11

Clinics for Mentally Retarded Preschool Children

Waterville – Thayer Hospital
9:00 a.m.: Jul. 17, 31, Aug. 7, 21, Sept. 4, 18
Lewiston – Central Maine General Hospital
9:00 a.m.: Aug. 12, Sept. 9
Lewiston — St. Mary's General Hospital
9:00 a.m.: Jul. 22, Aug. 26, Sept. 23

Cystic Fibrosis Clinics (In conjunction with the CMGH and MMC)

Lewiston – Central Maine General Hospital
9:00 a.m.: Aug. 2, Sept. 6
Portland – Maine Medical Center
9:00 a.m.: Jul. 16, Aug. 20, Sept. 17

anticostive* hematinic



PERITINIC®
Hematinic with Vitamins and Fecal Softener

A tablet-a-day provides:

• Elemental Iron (as Ferrous Fumarate)	100 mg
• Dioctyl Sodium Sulfosuccinate (to counteract constipating effect of iron)	100 mg
Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. (Now isn't that a good idea in an iron-containing hematinic? We'll send you samples if you'll send a request on your Rx blank, addressed to Department 150.)

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

488-7—6062

now she can cope...

thanks to

Butisol SODIUM®

(SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated. BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety, and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg. (¼ gr.), 30 mg. (½ gr.).



McNEIL

McNeil Laboratories, Inc.,
Fort Washington, Pa.

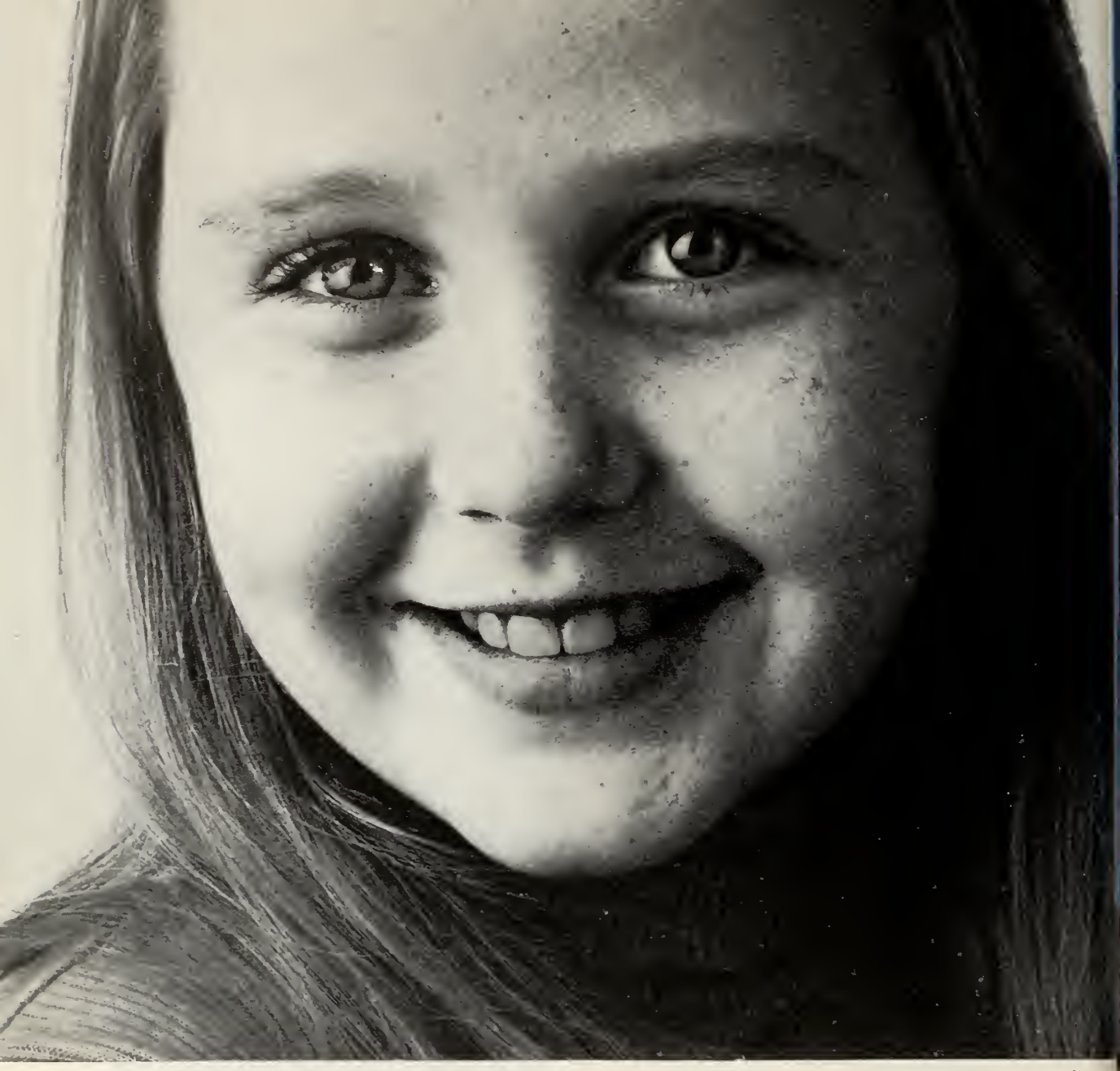


Photo professionally posed.

No injection after all!

This penicillin produces high, fast levels—orally.

Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL **PEN•VEE® K**

(potassium phenoxymethyl penicillin) Wyeth

Abbott Antihypertensive Building Blocks

A simplified approach to the practical management of hypertension



Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persists for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON

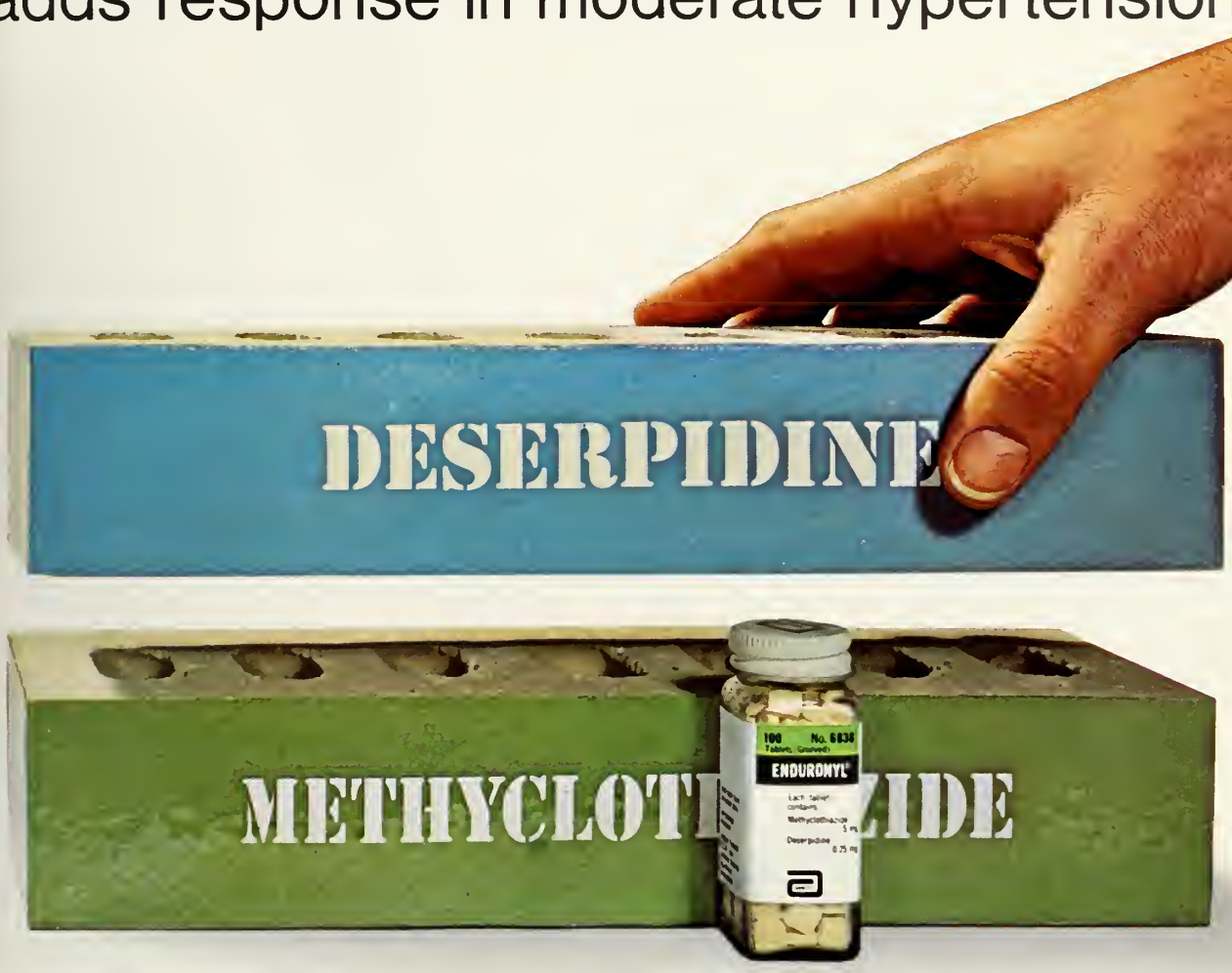
METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

When you wish to build further response, consider shifting to Enduronyl.

Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

Once a day, every day

ENDURONYL®

METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

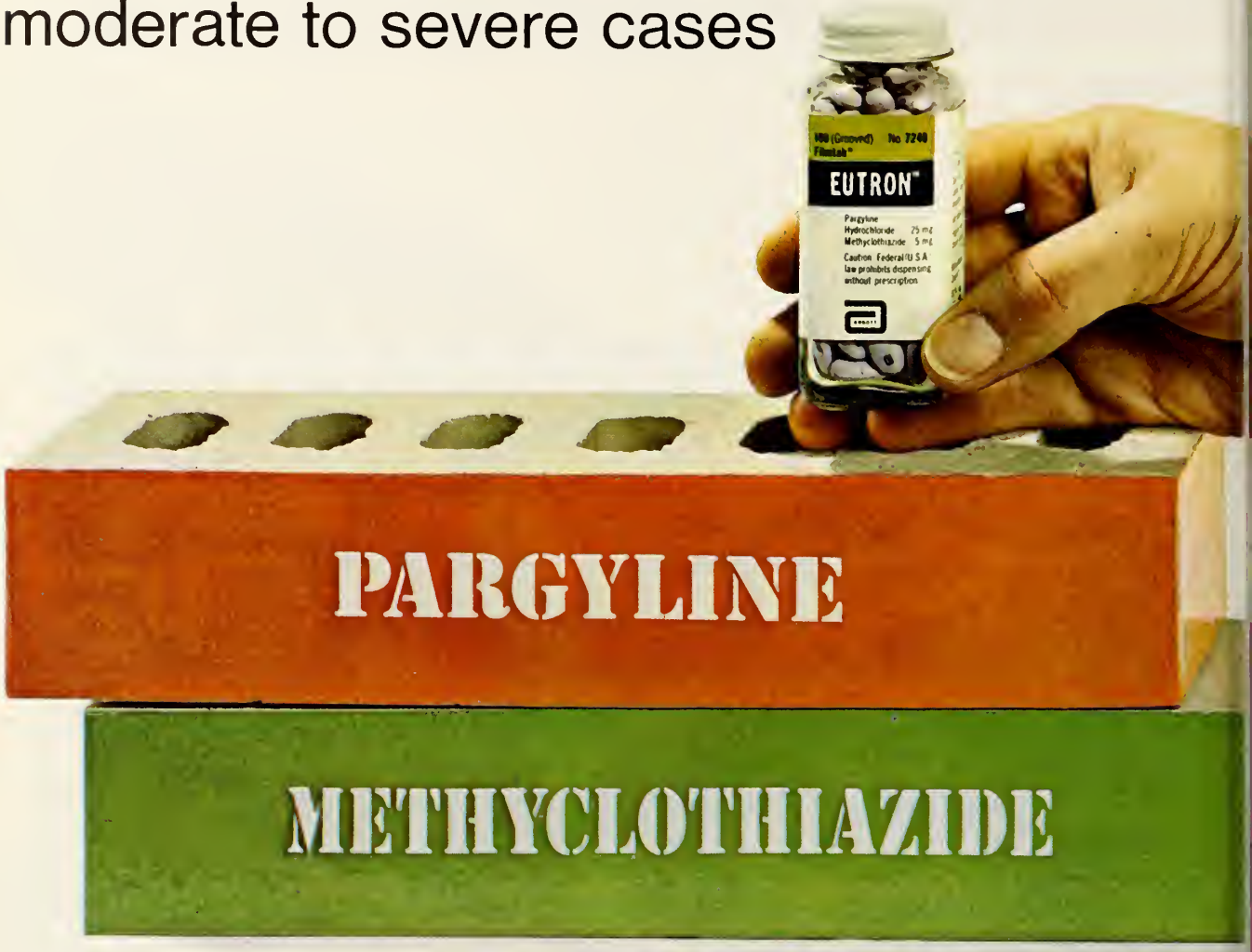
MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

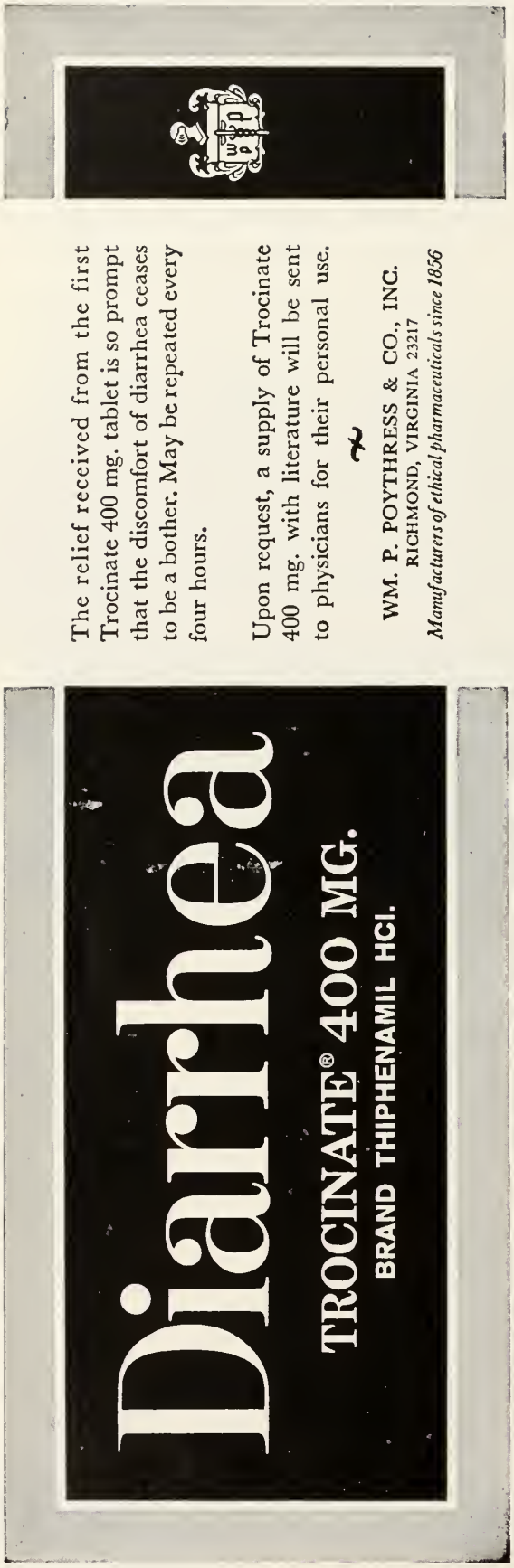
Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

ABBOTT

TM-TRADEMARK



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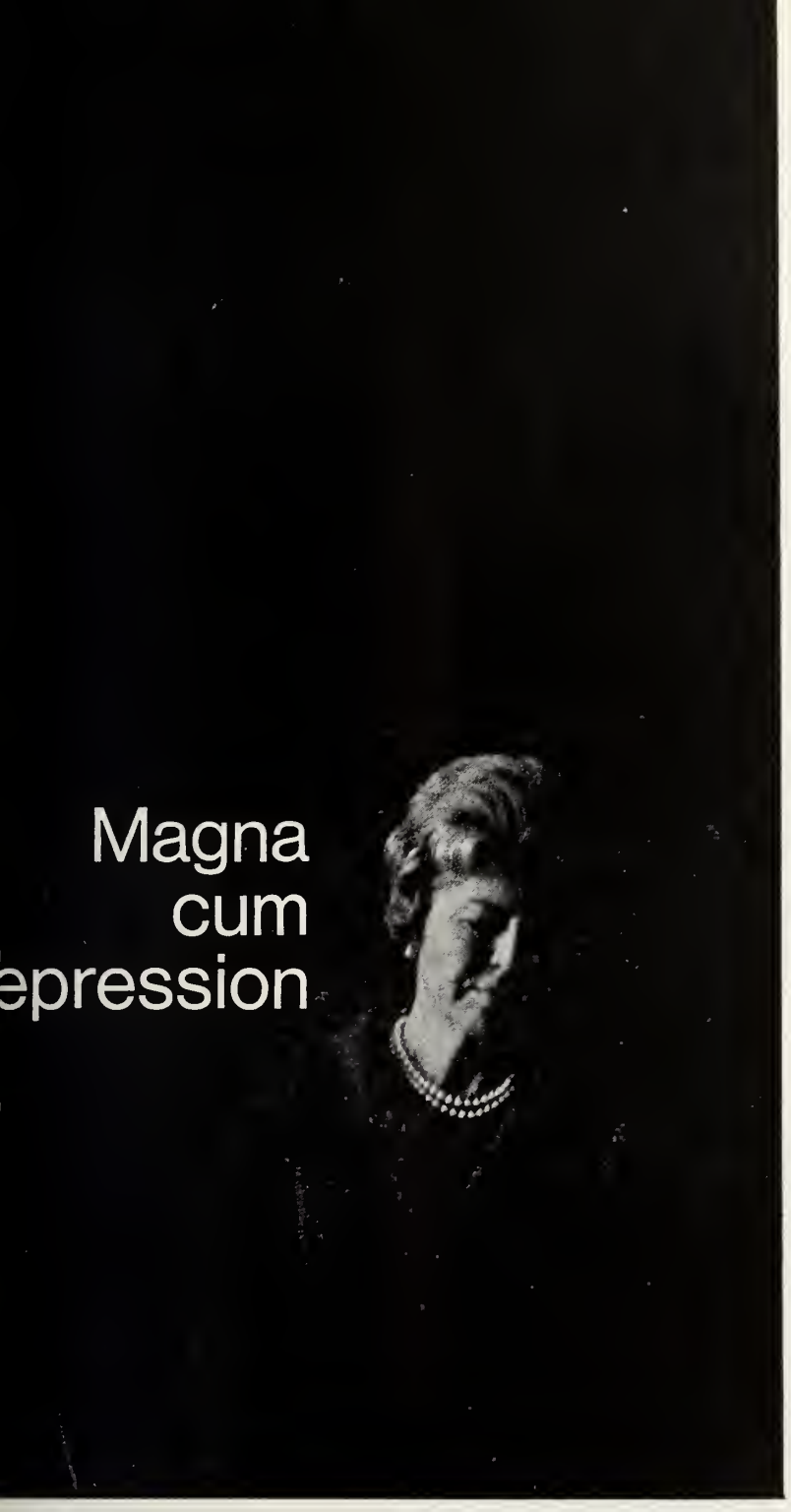
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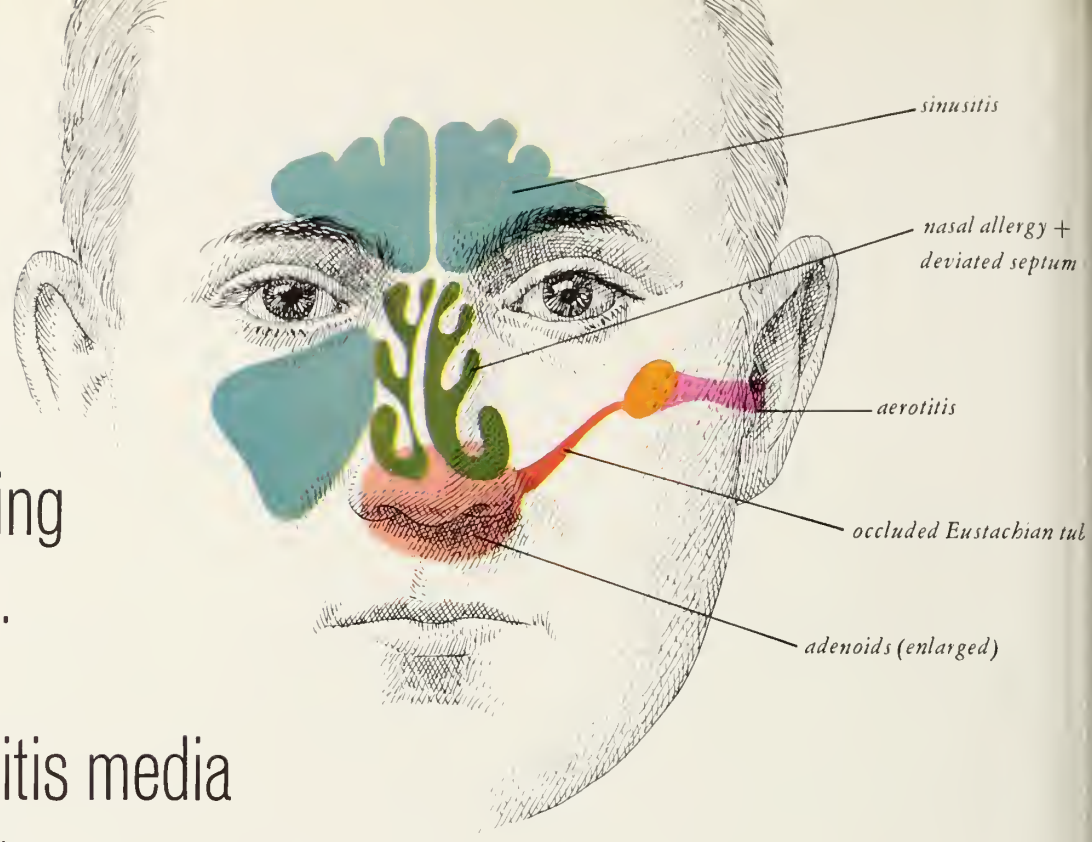
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this issue:
serous otitis media
an original article
by Robert H. Lofgren, M.D.



the complaining earache... key to serous otitis media

Robert H. Lofgren, M.D.
Associate Surgeon, Massachusetts Eye and Ear Infirmary, Boston, Massachusetts

Serous otitis media is probably the most common ear problem in children, especially in the wintertime. Diagnosis is usually easy in adults, but may be quite difficult in children, especially the very young child where one has to depend almost entirely on the physical findings.

The symptoms of serous otitis are a fullness in the ear, a mild hearing loss and mild earache. The earache can best be described as a "complaining earache" instead of a "screaming earache" as found in purulent otitis media. A young child may be irritable and pull at the ear. In milder cases, and as the ear recovers, gurgling and popping noises can be heard in the ear.

On examination one may see a yellow tympanic membrane and if a fluid level is present the diagnosis becomes easy. However, the eardrum may be dull gray, or slightly pink, or even perfectly normal. Pneumomassage using a Siegle otoscope or a closed-head electric otoscope must be done on both ears, otherwise the diagnosis will be frequently missed. Attempted movement of the drum with the pneumatic otoscope produces either a sluggish motion of the drum or no motion at all instead of the easily movable normal drum. The Rinne test is negative and there is a 15-20 decibel conductive hearing loss. The bone conduction may be better than normal and an air-bone gap may exist even with the air conduction within normal limits. Occasionally one finds a false nerve deafness on the audiogram when thick glue-like fluid causes immobility of both the oval and round window. Both conditions return to normal when the fluid is removed, but they make the interpretation of screening audiograms very difficult.

There is no single cause for serous otitis. One factor always present is blockage of the eustachian tube, but this alone is not enough to produce fluid. There must also be an inflammatory reaction. Blockage of the eustachian tube may be caused by many conditions. In children the most common cause is enlarged adenoids. In the summer the next most common cause is allergy. Upper respiratory infections or influenza are common causes in the winter. Nasal allergy, acute and chronic sinusitis, nasal septal deformity and cleft palate can all cause eustachian tube obstruction. Some children may have a congenitally small eustachian tube, but fortunately they usually "grow out of the problem."

The first sign of a nasopharyngeal tumor is often a serous otitis. One must always rule this out in any adult who later in life develops repeated or persisting serous otitis. Causes sometimes overlooked are nasogastric tubes after surgery, simple obesity and cardiorenal disease, which may produce congestion in the mucosal lining of the eustachian tube. In recent years we have been seeing a new cause—acute otitis media, where the patient is adequately treated with antibiotics but where drainage has not been

established either through the eardrum or down the eustachian tube. A sterile exudate is left in the middle ear.

The inflammatory response may be caused by a marked negative pressure as in air otitis from flying, or it may be from a mild bacterial or viral infection in the middle ear. Serous fluid is a good culture medium and will frequently go on to purulent otitis media, especially if the original blockage was caused by an infectious process such as acute rhinitis or adenoiditis. When the infection heals there may be scarring in the middle ear mucosa. Mucous glands develop in this tissue and pour out a thick mucoid material. This ear usually looks normal until a pneumatic otoscope is used. The objectives in treating serous otitis are to remove the obstructing agent and to provide drainage from the middle ear. Often this can be accomplished by decongestants and nose drops. If large obstructing adenoids are present they should be removed. Sinusitis should be treated with oral decongestants or nose drops, plus antibiotics where indicated. Nasopharyngeal tumors should be treated. Allergies should be treated with antihistamines and, where indicated, by desensitization.

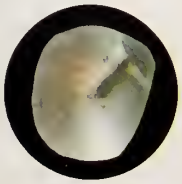
If the fluid does not clear with medical treatment within a week or two, a myringotomy should be done. If there is a question of active infection or if the fluid looks purulent, as is seen at the conclusion of acute otitis, cultures are taken. On adults this can be done in the office without anesthesia. It is no more painful than an intravenous needle for a blood test. A good safe topical anesthetic has a tremendous psychological value to the patient. Children under the age of 1 require no anesthesia. Between the ages of 1 and 3 anesthesia is not absolutely essential although a general anesthetic may be used to avoid the child's possible mistrust at follow-up examinations. I usually do the myringotomy at the same time as the adenoidectomy if the adenoids are enlarged. Once drainage has been established with decongestants or by myringotomy, positive pressure inflation of the middle ear is invaluable in forcing out the serous fluid and keeping it from reforming. The patient can do this himself by performing the Valsalva maneuver. This should be done several times a day, by taking a deep breath, holding the nose and blowing hard against the closed lips for a second or two.

In resistant cases where the fluid reforms as soon as the myringotomy heals, small polyethylene tubes are inserted through the myringotomy site. Insertion of the tubes, even in adults, usually requires an anesthetic. Good anesthesia can be obtained by infiltrating the canal wall with a local anesthetic, using a #27 needle. Once inserted the patient has no sensation of the tubes' presence. Be careful to caution the patient or parents not to allow any water to get into the ear canal while a myringotomy is open or a tube is in place. Water can be kept out by a pledget of lamb's wool in the ear canal or a cotton pledget thickly coated on the outside with petroleum jelly. I check these patients a week after a myringotomy to be sure it is healed and at two month intervals until the tubes have fallen out, usually within three to six months after insertion.

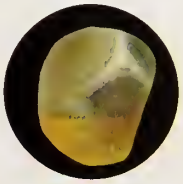
The mucoid type of fluid is so thick and tenacious that it is appropriately called a glue ear. It is aspirated only with difficulty through the eardrum, and occasionally must be removed through a tympanotomy. This thick, glue-like fluid is prone to recur, as the myringotomy usually heals long before the mucous membrane has returned to normal. Repeated myringotomies, as many as ten or twenty, were formerly required for this condition. Now polyethylene tubes are inserted initially when this thick, glue-like material is found. At times a subacute mastoiditis may accompany the serous otitis, which will necessitate a simple mastoidectomy before the condition can be eradicated. Usually the thin serous fluid readily responds to decongestants or to a myringotomy and removal of the eustachian tube obstruction. Occasionally, however, even serous fluid will repeatedly reform. For this, resection of the tympanic plexus of nerves which lies on the promontory of the middle ear has been carried out, as the tympanic branch of the glossopharyngeal nerve is the secretomotor nerve to the ear.

Failure to diagnose serous otitis is the most common cause of the recurrent, almost continuous otitis me-

Otoscopic Views



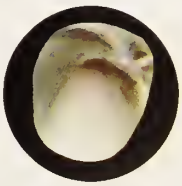
Normal



Acute Serous



Acute Purulent



Chronic Serous

dia seen in young children. In these cases a myringotomy will frequently provide a long-term cure without adenoidectomy or any other surgery. Failure to do this may allow the condition to go on to acute or subacute mastoiditis. Adhesive otitis media with scar tissue binding down the ossicles or tympanosclerosis may also result with permanent impairment of hearing. The prognosis for hearing with adhesive otitis or tympanosclerosis is usually poor. If the adhesions are removed, they reform, and the same is frequently true of tympanosclerosis even after a tympanoplasty. For many of these people a hearing aid is the only solution. The constant negative pressure in long standing serous otitis media may draw in either Schrapnell's membrane or the posterior superior portion of the eardrum forming a pocket to cause a chronic otitis media with cholesteatoma, which may not become apparent until twenty or thirty years later.

The non-medical complications of improper diagnosis or treatment may be even more serious. The irritable child, the frequent bouts of acute purulent otitis media with pain and fever, the expense of antibiotics and doctors, and the time lost from school or work affect the entire family.

In summary, serous otitis has many causes. There is a blocking of the eustachian tube and an inflammatory reaction in the middle ear mucosa, the latter usually caused by a mild infection. The treatment is to provide immediate drainage by decongestants and where necessary, by a myringotomy. The obstructing agent must be removed by surgery if it is adenoid or by oral decongestants, and antihistamines or nasal spray if it is an upper respiratory infection or allergy. Occasionally resistant cases require plastic tubes placed through the eardrum or other more radical surgery. Failure to treat properly leads to hearing loss which may be permanent, repeated acute otitis media or possibly even chronic otitis media with cholesteatoma.

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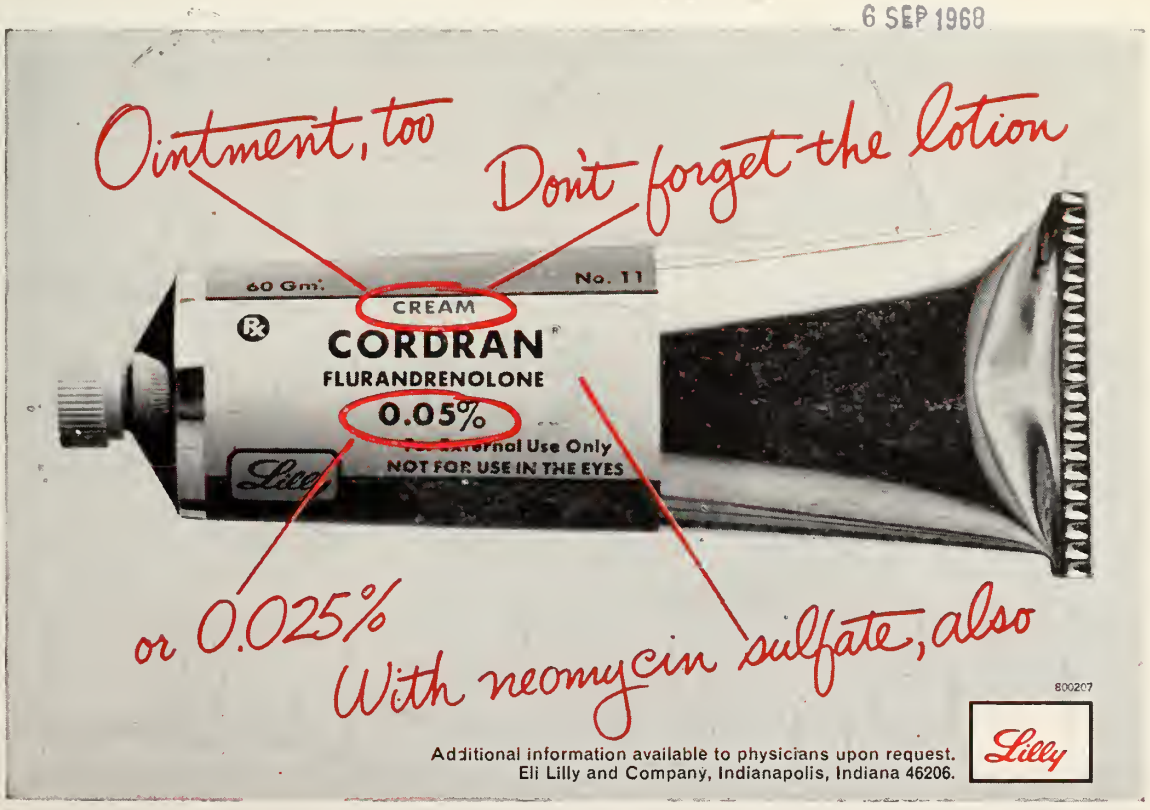
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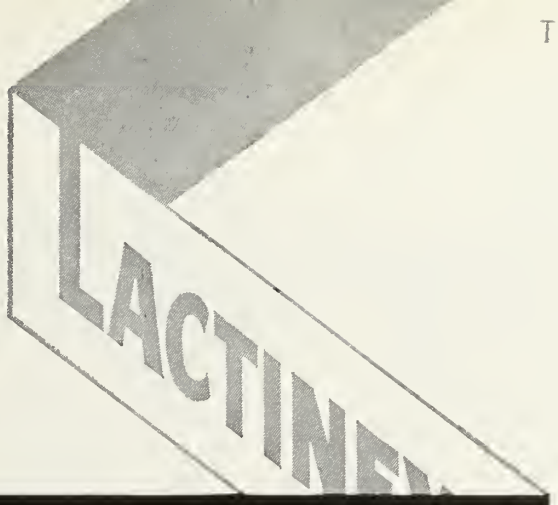
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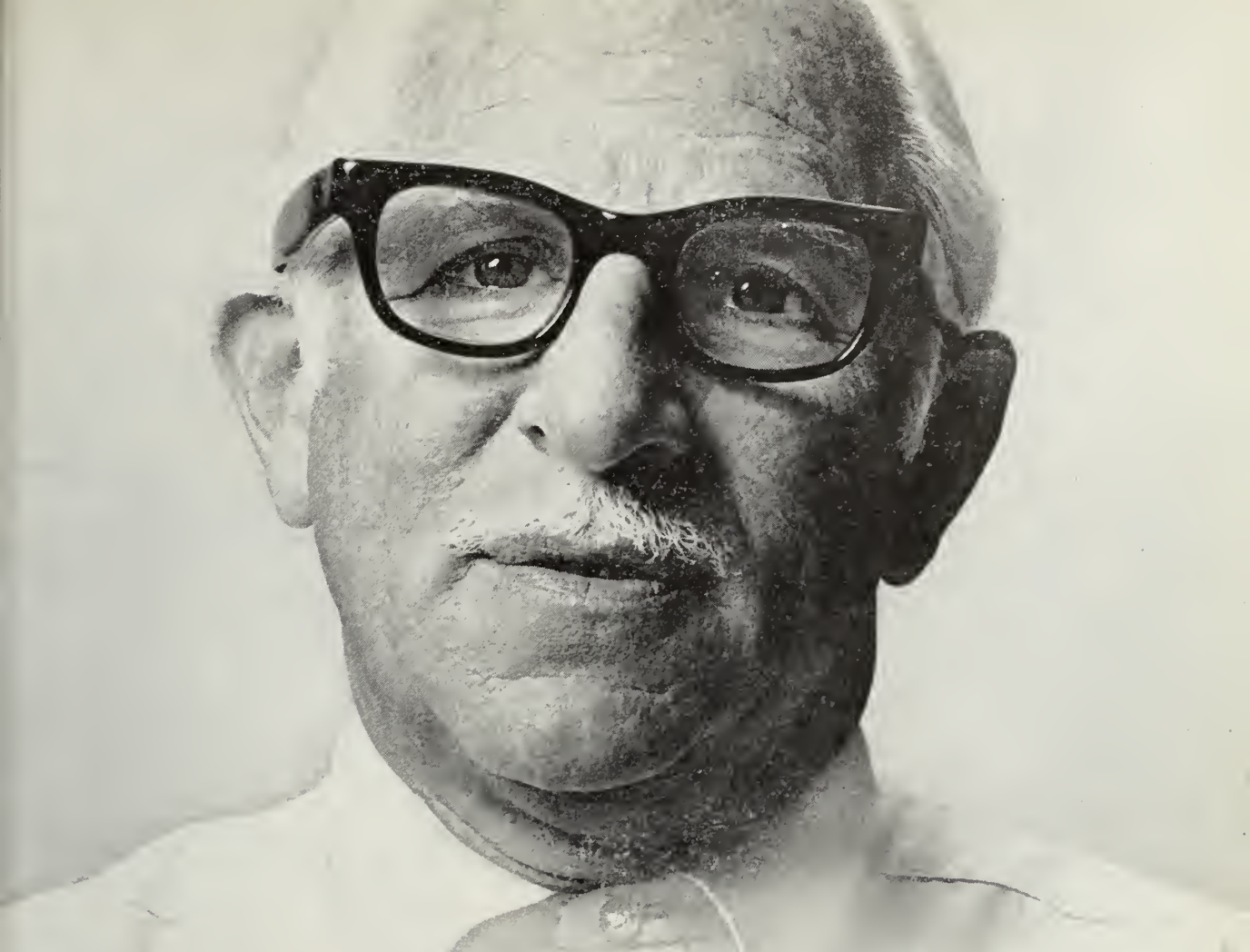
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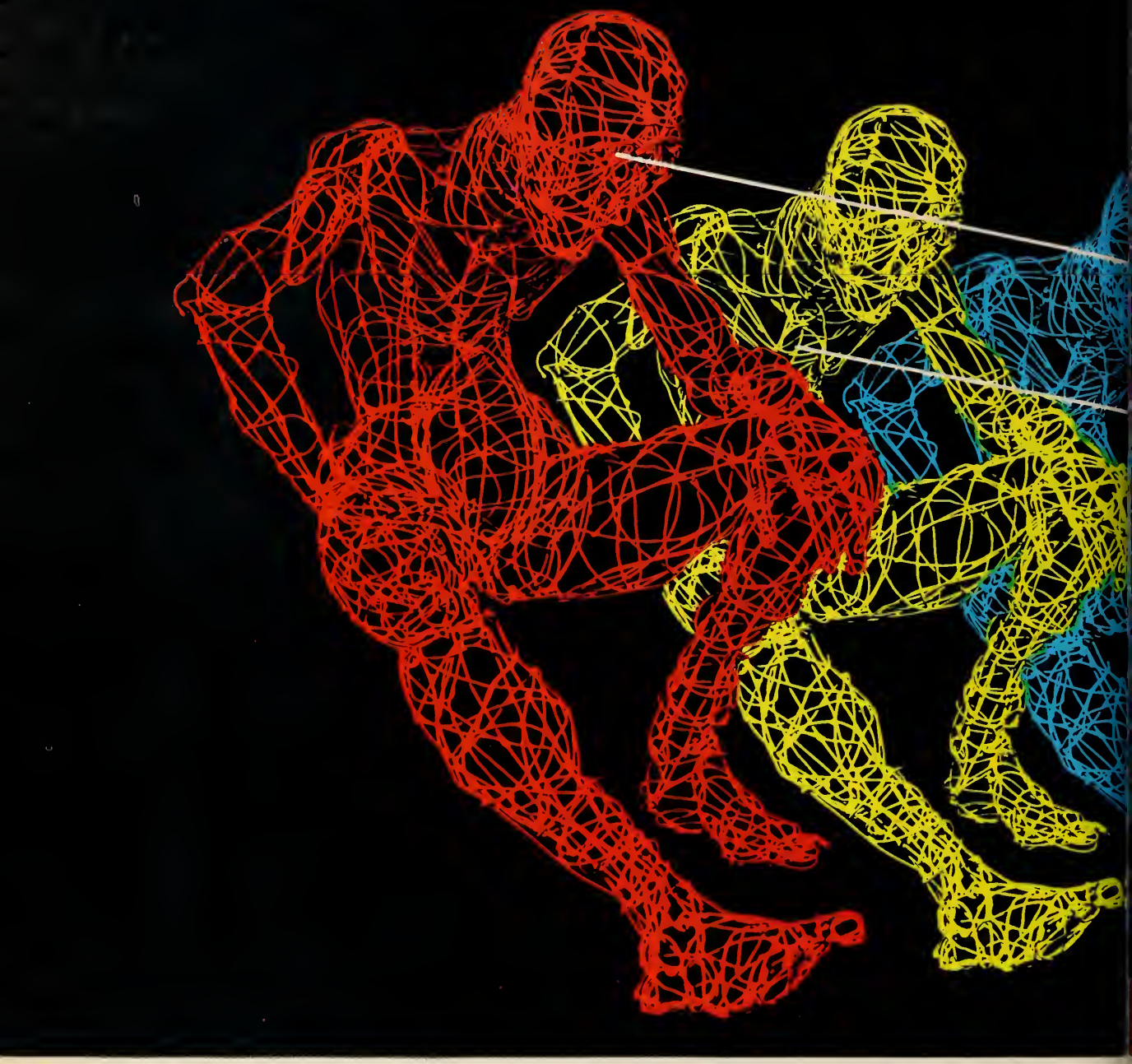
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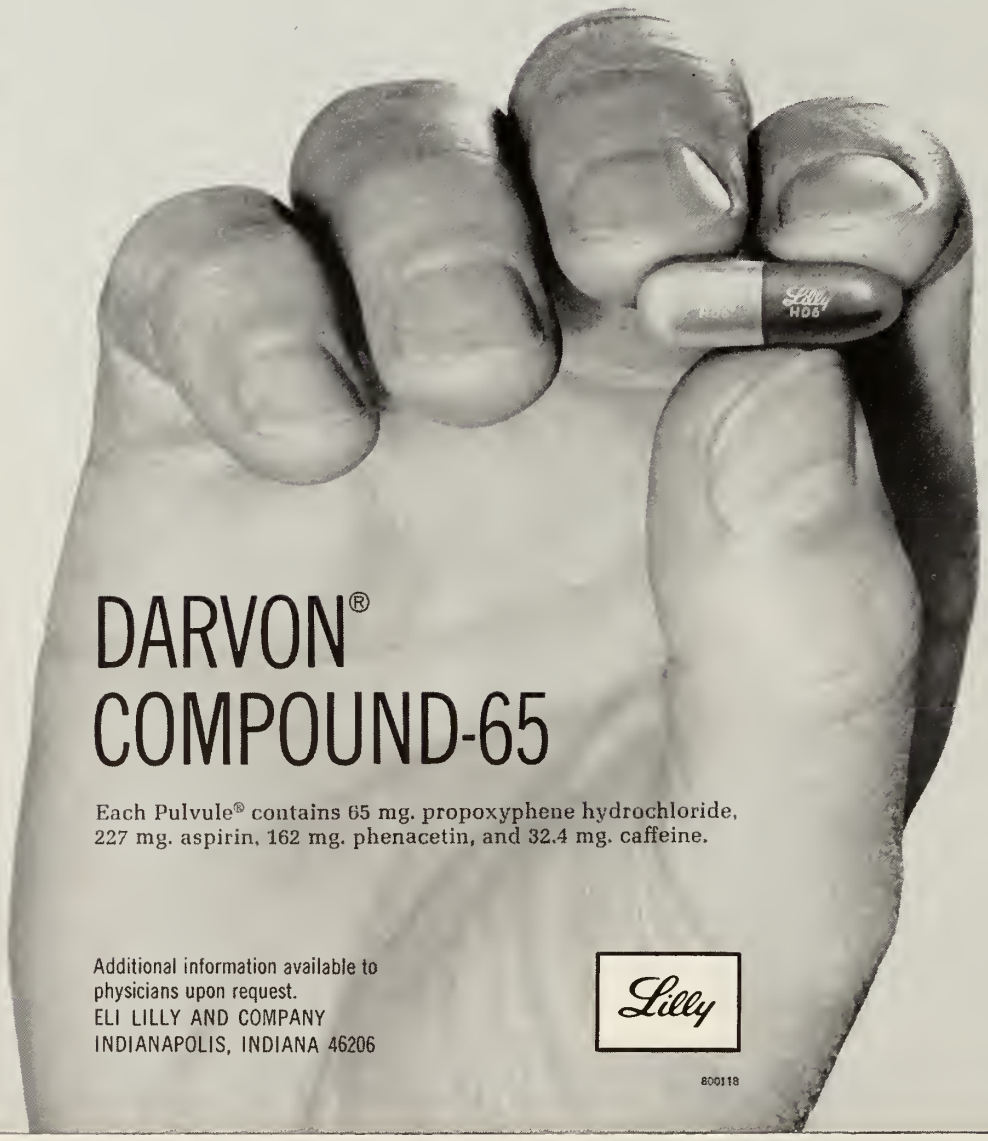
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The Journal
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President's Address*

Paul S. Hill, Jr., M.D.

Each year at this time in general assembly, it has been customary for the President of the Association to be given the opportunity to speak to his peers on a subject of his own choosing – making it certain, moreover, that before his impending release from his responsibilities, he will spend hours in preparation, – a period liberally tinged with concern and apprehension over what he might say that will be interesting or of value to his audience – as well as to what he should not say or thrust upon his listeners on a day in June.

In my case the comforting thought came to me that if it should be a fair day my load will be substantially lightened, the greens heavily trodden, the cry of "Fore!" drowning out the substance and the moral of my address. Thus, as it stands, I have an even chance of success!

The search for a subject has not been easy. In this extraordinary period in the field of health, so much has been written about Federal laws, Federal health planning, Federal intervention, and the image of the profession of medicine, that I have come to be annoyed by the phrases and cliches that seem to have been coined or resurrected for this purpose alone it seems that everyone is talking about "implementation," "quality in medicine," "providers of service" or "delivery of medical care" as if medicine were wrapped up in a neat brown package arriving at its destination in any conveyance, except, heaven forbid, a horse-and-buggy.

We are undergoing a rather drastic change in the field of medicine; its abruptness and its breadth is astounding and sometimes disconcerting. But the world today is changing at breakneck speed and everything that has been associated with health has become a part of it. The problem is one of attaining and maintaining a balance between educational, economic, and social forces on the one hand, and the achievements of scientific medicine and its manner of presentation on the other.

But lest we become discouraged, we must recall that medicine since its earliest history has been subject to change, much of it within the profession itself. In the time of Hippocrates in the 4th Century before Christ, the concept of medicine as an art or as a science was debated and still is today. For many hundreds of years, medical education was directed toward clinical medicine – a physician was born to be a physician – he had a natural aptitude, humanness and compassion with the highest ethical conduct. He applied his experience along with the experience of others based upon observation in treating his patients. This concept reached its pinnacle in England in the 18th and early 19th century for they lacked the tools of experimental medicine. Claude Bernard's investigation set the stage for the great German school of the late 19th century when such men as Virchow, von Recklinghausen, Billroth and Henle found that experimental reasoning could enrich and augment the art of medicine in its clinical approach without replacing it.

In effect, this is what we have today. Experimental thinking aided by the most sophisticated tools ever known to man and assisted by its kinship with other scientific disciplines, has produced so much in a relatively few years that its application through clinical channels has been all but impossible. In 1940, national expenditures for medical research totalled 45 million. In 1947, it was 87 million. But in 1967, the total was 2¼ billion dollars, a 5000% increase in little more than a quarter century.

In clinical medicine we are being urged today to upgrade and expand our knowledge and awareness of scientific medicine as if those who practice medicine had never before realized that it is a continuing process of education. I am sure that we welcome these projects

*Presented at the 1968 annual session of the M.M.A. House of Delegates.

for our continuing education as long as they do not build up to the point where the already overloaded physician has no time to devote to his patients. His knowledge then would be of little use to him or to his patients. I recently read that if a scientist who reads at the usual rate of 3000 characters a minute were to keep up in his field 60 years ago, he would need only 25 minutes a day, but that 11 years hence, he will have to read continuously every hour of the day to accomplish this. So there is a limit to the practical application of knowledge.

However, in the confusion of our times, medicine must not lose sight of the remarkable achievements and successes of scientific medicine which now encompasses other sciences as biochemistry, physics, political and social sciences, electronics, engineering, and even law. Less than six months ago this country's population exceeded 200 million and by the third millennium should exceed 300 million. We have nearly twenty million people over 65 and 12,000 over 100 years of age. The expectation of life has been advanced beyond the three score and ten and it has become apparent that longevity can be further extended. The control of infectious processes in infancy and childhood, the virtual elimination of some diseases as typhoid, polio and tuberculosis; the successes in the treatment of heart disease, diabetes, hypertension, rheumatic fever, nephritis; advances of surgery in cancer and cardio-vascular diseases; the treatment of malignancy with radiation and chemotherapy are only a sampling of what has been accomplished in prolonging life. There is much more on the drawing boards, the recognition and cataloging of viruses, the elimination of the Rh hazard and even the synthesis of the basic substance of life. DNA, Cybernetics and the computer may yet provide the window to the mystic processes of the mind.

The pressures of underlying forces are at work to fill the void of this rapid pace of medical progress. American physicians have always cherished an independence from lay influence in making medical decisions and have provided such quality of service that the best in American medicine is acclaimed as the best in the world today. Inevitably, as these pressures are generated, third party interference has slowly hacked away at the structure of American medicine. Through modern media of communication, our people have been led to demand even more of us. They are demanding better health, demanding better service, demanding better means of acquiring these services, and at the least cost to them. The question is do we have the manpower in our profession, – do we even have the expectation of manpower ample enough to satisfy these demands! If we have not, inevitably there will be a deterioration of care and we shall sacrifice individual excellence for mass mediocrity. Through Government, the health industry has become one of the largest industries, if not the largest, in the nation employing several millions of people, yet we as physicians, the admitted key to health problems, remain much the same in numbers. The explosive increase in information has led to fractionation of the practice of medicine and continual withdrawal from the wider fields to hospital-based and group practice. Some of our critics inform us that solo practice will inevitably disappear, but I find it hard to believe. The Government has responded to these underlying pressures by passing health legislation of such quantity and variety that it is not only frequently confusing and exasperating to the medical profession, but also to the public which it is meant to serve, and if not to the people who are charged with its implementation. Nevertheless, we have these laws which will change the face of medicine in this generation and in generations to come. Therefore, we must face change as we have many times in the past. We cannot pretend that it is not there. We must not become discouraged and we must adjust to it the best way we can, especially in the clinical field where we have the opportunity to join scientific medicine with that intangible something which we as a profession have always been proud to possess – human warmth, kindness, and compassion. This is the true quality of "quality medicine."

The changing aspect of medicine is a real problem in our own State of Maine, but truly a challenging one. Maine is, by and large, a rural state having only one border with the rest of the United States. It has a population of about a million and there are 791 active physicians, less than one physician per thousand of the population. These physicians are largely clustered around the "backbone" of the State, close to the larger hospitals. Many of them are in special fields and perhaps about 35% are in general practice. Currently we have 65 students in Medical schools. It is a question how many of these will return to practice in Maine and most who do return will come back trained as a specialist of one kind or another. Unfortunately, few will seek to practice in rural areas and few will desire "solo" practice. There are many communities in Maine which do not have adequate medical coverage and here and there, their voices are raised in protest and criticism, and quite rightfully so. Maine is not unique in manpower shortage – physicians, nurses, technicians and other ancillary personnel – but we can be condemned for not trying to do something about it. The Maine Medical Educational Fund and State appropriations have helped young men and women to study medicine, but without guaranty that they would return to Maine. Medical schools can be blamed I suppose, for not considering family practice as a specialty in itself and for not planning ahead for population increase requirements. It has been suggested, and I think the suggestion a good one, that medical students after graduation should be urged to spend a year or two in community areas in a sort of preceptorship as a part of their immediate postgraduate training. It is here that they may see illness in its original form, unfiltered, virginal, and unreferred. And it might be to the liking of some.

The proposition of the feasibility of a medical school

in Maine was as you know, turned down several years ago by the Truslow report. In view of the rapidly changing picture in the field of medicine in Maine and what is to be expected of us by Federal and State programs, I am not at all sure that this subject should be allowed to remain dormant. Our institutions of higher learning in Maine are also undergoing rapid change in the field of postgraduate education, and there may come a time sooner than one would think, when a Medical school will not only become feasible but somewhat of a necessity. Bowdoin Medical School supplied a very high percentage of the practicing physicians of Northern New England for a century and some are still practicing. A medical school in Maine could at this time satisfy the postulates of Abraham Flexner's famous report on medical education.

There are hundreds of different career possibilities in the health field today and it is our responsibility to acquaint guidance directors and students at the high school level of the opportunities available. This is where we find the doctors, the nurses, the technicians of tomorrow. Colleges and universities should be encouraged to play their part too, in emphasizing courses related to the science of medicine.

We are sorely in need of nurses and we shall need them in abundance. Whether they are Baccalaureate, Diploma School, Associate Degree, or Practical, we need them all, and in quantity, and soon. Nurses are the backbone of the medical team. The diminishing output of professional nurses for lack of schools and facilities should be a source of consternation and alarm to physicians, to hospitals and to the public. State officials and the Legislature should examine this problem closely. It is true that the Federal Government has recently made available appropriations for nursing schools, but these awards are thinly allotted and difficult to obtain, and cannot be expected to benefit our few remaining diploma schools in time to save them. With the inauguration of all these Federal health programs, the need for nurses as well as physicians will be further compounded.

Community-type hospitals are generally well distributed in Maine. As these hospitals become more sophisticated through use of Hill-Burton funds and Medical Regional Programs they can become a powerful stimulant to the increase in physician manpower and its distribution as it becomes recognized by young physicians that there is abundant opportunity to use their knowledge to a better advantage than in crowded and competitive medical centers. Yet, through interlocking programs and arrangements with major hospitals, they will find opportunities not only of bringing good medicine to the people who need it, but obtaining for themselves a continuum of medical education. The concept of a regional effort in medicine was originated in Maine, as you will recall, by the Bingham Associates Fund in 1932. Maine need not be a follower, but can be an originator in the clinical application of medical care. Maine has real prospects of becoming a dynamic industrial area, although the recognition of its potentialities is belated.

The entire structure of medical practice as we have known it is being relentlessly and inevitably changed. It is my belief, as I have tried to emphasize, that this change is primarily due to the potential which exists between unprecedented biomedical research and its clinical application, with the public as a catalyzer. We, as physicians, have a moral responsibility to help mold the patterns and to set it right. Dr. Blasingame, writing in the American Medical Journal, said that we "could well declaim with Shakespeare's Hamlet 'The time is out of joint O 'cursed sprite, That ever I was born to set it right!' "

For years, physicians have been taught to view the patient as a whole – not only his physical condition, but also his emotions, his work, and the environment in which he lives. Much of the time we have considered these factors from our office chairs. Public Law 89-749, Comprehensive Health Planning, gives us and our medical societies the right to become primarily involved in health planning encompassing all health facilities, services and manpower. It gives us a chance to consider all conditions which may affect health in an area, environmental, socioeconomic or otherwise and furthermore to do something about these conditions. The House of Delegates of the AMA in its last clinical convention in Houston adopted a report from the Council on Medical Services which concludes that "the planning, organization and distribution of health facilities and services are a prime responsibility of organized medicine – a responsibility that should be given higher priority among the various activities of medical societies at the State and local level." This program does not interfere with the traditional patient-physician relationship, nor with the function of the practice of medicine, and this is guaranteed in the law itself. It is perhaps the golden opportunity for us to demonstrate to the public that we are sincerely, vitally and broadly interested in health problems, and that we will join with them to provide cooperative leadership wherever and whenever these problems arise. Gaps in medical care must be searched out by the State Association, by County Societies, Hospital Staffs and individual physicians and programs initiated through the Comprehensive Health Planning Law, or by other means. This is our responsibility and privilege and we should keep it so.

Apropos to this, one of the most critical needs in Maine is a comprehensive emergency service system. Your Association, recognizing the gravity of this need, has taken steps to initiate a cooperative program of all the disciplines which would be involved in emergency medical care. A Special Committee of this Association on "Medical Emergencies, Transportation and Communication" has been appointed to work with the Department of Health and Welfare and the many organizations which are involved. Considerable groundwork has been

accomplished by State agencies in the past year or two, and by the Trauma Committee of the American College of Surgeons but it is a field in which medicine should be vitally involved. There is no question that wider, better, quicker and more sophisticated coverage of road accidents, home injuries, and acute medical problems, could save a lot of lives. This means better communications – hospital radio networks; radio communication by hospital with doctors' cars, with key technicians and with ambulances. It means training in the handling of the injured, in resuscitation, in major civilian disasters, prototypes of which are already being done in some areas. We would look to the possibilities of what the future holds – to helicopter service along our major highways, to strategically placed State-controlled ambulances for emergency only, to bringing definitive medical help quickly to the scene of an accident or a medical emergency. For it sometimes seems difficult to correlate the work and the energy put into tracking down and devising treatment for some remote disease with the destructive forces now so rampant.

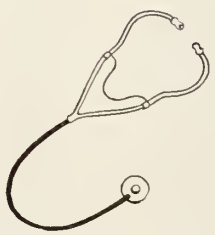
A letter just received from Dr. Charles L. Hudson, Director AMA Division of Health Services stresses that in view of the events of the past week in Los Angeles, it is urgent "that our association give renewed efforts to foster an awareness of the need for and development of community-wide action programs on emergency services."

I should like to speak briefly of another problem which I think is important to proper medical care in Maine. This is the problem of continuity of medical care, the care which a patient receives after discharge from an acute hospital and when he is still in need of medical or nursing care. This involves older people for the most part. I am aware that there are about 1000 beds available for extended care and something like 2000 beds for skilled nursing care. I am also aware that the Department of Health and Welfare is doing a pretty good job at setting up the mechanism for Title XIX. Here and there, good facilities exist but there are not enough of them. Very few are authorized to accept medicare patients and this becomes a severe problem in evacuation of patients from the acute hospital. If a Medicare patient requires a bed, it may be miles away from home which means dislocation of the patient from his familiar environment, difficulty of visitation by relatives, and loss of continuity of his physician's care. For older people, continuity of care does not simply mean a bed, a tray, a chair and medications – it means an evironment which is interesting, stimulating, productive, giving in effect the will to go and to live. I don't know how this problem will be solved but I believe that society must do something about it before it talks too much about quality care for all.

Life on this earth involves change. The practice of medicine is changing with such rapidity that we have become very much aware of it and to those of us who have been in practice for many years, the process is magnified, to some of us it may seem a process of decay and harmful to medical care as we knew it. To others it may be stimulating, a sign of growth and progress. To a cynical few, it may be like the road sign at the detour – "Thank you, here are your taxes at work!" Men and even governments may think they are initiating great changes, but these are at best only based upon those conceived and executed many years ago by others. And so on back to the creation of the Universe. The certainty of change is good, but we in the profession of medicine must adapt ourselves to it in order to pass from one stage to another without losing what Osler called our "equanimity."

My visitations, contacts, and observations, as well as my misfortunes, while in this office, which I shall have completed in a few hours, have taught me, that of physicians in Maine, there are none finer anywhere, well-equipped to bring to the people of Maine excellence in medical care.

323 Main Street, Saco, Maine 04072



Skeletal Metastases from Carcinoma of the Colon

DEMITRIOS NIKOLAIDIS, M.D.*

INTRODUCTION

There is a general belief that carcinoma of the colon rarely if ever metastasizes to the skeleton. Consequently, in the differential diagnosis of neoplastic osseous lesions, the possibility that the process in the bone is secondary to a malignant neoplasm originating in the bowel often is not even taken into consideration. The establishment of the nature and site of the primary focus is frequently difficult. The clinician welcomes any aid which the radiologist can afford in the solution of these vexing problems.

The experience in our clinic indicated that colonic carcinomas constitute a source of metastatic lesions involving distal parts of the skeleton. In all cases of bizarre or unusual bone neoplasms, especially in older people, metastatic carcinoma from the bowel must be considered.

It is the purpose of this communication to describe and discuss a series of cases with osseous metastasis in patients with primary carcinoma of the colon.

FREQUENCY

Study of the literature shows that in the past most authorities were of the opinion that metastases to bone in primary colonic neoplasms were rare.

It appears that the first case published was by Croiling in 1870. It was a metastasis in the upper extremity to the right radius in a patient who died from cancer of the rectum. Other authors who have each reported one case are Pitts, Fuzinamy, Hildebrand, Aufses, Brown & Warren, Bacon & Jackson, Ghormley & Valls. Coley classifies these carcinomas as osseophobes. Ewings, Robbins and other authors make no mention of the fact that malignant tumors of the gastrointestinal tract may affect the bones. Abrams and others have pointed out that bone metastasis do indeed occur. In a series of 1,000 consecutive cases of malignant tumors of epithelial origin studied at autopsy at the Montefiore Hospital, skeletal metastases were found in 272 instances. There were 118 colonic carcinomas with 11 presenting metastases (9%), and 87 cases of rectal carcinoma, with 11 having osseous metastases (12.5%). A review of the autopsy records at the Mallory Institute of Pathology at Boston City Hospital for a five-year period revealed 183 cases of carcinoma of the colon. Of these, ten showed metastases to the skeleton, an incidence of 5.5%.

These series of cases as well as previous studies by Aufses, Ghormley, and others indicate clearly that primary carcinoma of the colon is much more apt to produce metastases in the skeletal system than was formerly believed to be the case.

There are many reasons for the apparently relatively small number of cases of osseous metastases in colonic carcinoma.

1. Many cases are unrecognized as the secondary lesion remains undiscovered both during life and at autopsy.
2. Involvement of the bone can be demonstrated roentgenographically only when it is moderately advanced.
3. As a practical matter, it is not feasible to perform roentgen studies of all bones in conjunction with every positive barium enema examination, nor is it possible for the pathologist to examine all of the bones microscopically. Detailed observations of these types are reserved for patients who, during life, had clinical manifestations which indicated the possible presence of a lesion involving the skeleton.

Nugauchi in a series of postmortem studies of the lumbar vertebrae in 35 patients with cancer found 5 with gross evidence of metastatic disease, while there were also 5 others in this same group with similar involvement which was detectable only on microscopic examination.

It is believed today however that Strontium Bone Scanning is going to contribute in the early detection of metastatic cancer.

MODES OF SPREAD

The routes of spread and the sites of involvement in metastatic lesions are of particular interest and importance to the roentgenologist as he so frequently is the first to detect the disease and give a clue as to its nature and origin.

It is known that the spread of metastatic disease may be through the lymphatics or veins. In the case of the former, there is early invasion of the intramural vessels, the superficial lymphatics being the first to become involved. This may occur even prior to penetration of the muscular coats of the colon by direct invasion of the growth. The route of involvement is along the lines of the lymphatic pathways which drain the affected portion of the bowel, although bizarre and unusual patterns ensue in the presence of blockage of the lymphatics with resultant diversion or reversal of the flow.

Brown, Warren, Joffe and most other authorities believe that distant metastases are the result of invasion of the veins rather than being due to involvement of the lymph channels, particularly in the case of skeletal lesions. Recent studies proved that venous dissemination is

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Case No. 1, Fig. No. 1.

of common occurrence. Engell has demonstrated the presence of cancer cells in the venous blood in 41 of 76 cases of carcinoma of the colon. Invasion of veins of neoplastic cells occurs chiefly at the periphery of the colon, the pericolic region being the site of principal involvement.

Since the spread of metastases is thought to be due to the actual transport of cells in the blood-stream, there remained the unexplained question as to how the malignant cells could reach the skeleton without the lungs or liver being involved. Various theories had been advanced to explain this paradox. The logical explanation was based on the extensive plexus of veins termed the vertebral system first described by Batson. This vertebral venous system or plexus with its tributaries and extensions forms a large venous lake or reservoir which is connected with the veins of thoraco-abdominal cavity at each vertebral level.

X-Ray Manifestations

The roentgen changes most commonly seen are of the osteolytic type and are characterized by localized destruction of the bone. In some instance, there are proliferative



Case No. 3, Fig. No. 2.

changes with osteosclerosis. New bone formation with spicules or ray-like projections at right angles to the cortex producing an appearance similar to that in primary osteogenic sarcoma is also seen. Differential diagnosis in this type of case is attended with great difficulty. There may also occur mixed types with both osteolytic and osteoblastic changes occuring simultaneously.

Report of Cases

Case No. 1 – Fig. No. 1: A.L. – An 81-year-old female, had previously been operated upon for carcinoma of the cecum and ascending colon. Two years after the operation she noticed a painful swelling in the right upper arm. X-ray examination showed destruction of the anterior cortex of the mid-shaft of the humerus, a characteristic "Codman's triangle," and a soft tissue mass. Biopsy (No. 50-4612) showed undifferentiated metastatic carcinoma, primary in the colon.

Case No. 2: S.G. – A 76-year-old male, gave a history of Miles resection for adenocarcinoma of the rectum 15 months previously. Path. report (No. 558-1663), showed well differentiated adenocarcinoma of the rectum involving the submucosa with vascular invasion; there were no metastases in nine lymph nodes. X-Ray examination of the pelvis revealed radiant mottled areas in both public and ischial bones due to osteolytic metastases.

Case No. 3 – Fig. No. 2: A.C. – A 64-year-old male had had a Mile's resection for adenocarcinoma of the rectum four years previously. Roentgen examination revealed an area of bone destruction associated with spicules of new bone production involving the humerus. Biopsy (No. 559-4002) showed metastatic adenocarcinoma, primary in the colon.



Case No. 4, Fig. No. 3.



Case No. 4, Fig. No. 3 (Different Exposure).

Case No. 4 – Fig. No. 3: S.M. – A 55-year-old male had a Mile's resection for adenocarcinoma of the rectum. Roentgen study 14 months later showed a lesion involving the right ischium and pubis with areas of bone destruction and numerous fine spicules of new bone extending from the cortex into the soft tissues in a sun-ray like formation.

Case No. 5 – Fig. No. 4: The patient was a 43-year-old male who had had a right colectomy for carcinoma. Three years later x-ray examination of the right scapula revealed sclerotic changes with spicules of new bone formation with a sun-ray like appearance. Re-examination four months subsequently showed increased density involving the right ilium and intertrochanteric region of the left femur, indicative of osteoblastic metastases.

Case No. 6: F.R. – A 70-year-old female who nine years previously had had an abdominal perineal resection for carcinoma of the rectum. At operation the carcinoma was found to have extended to the subserosa; a metastatic nodule was also present in the right lobe of the liver. Path. report (No. S52-1565); "adenocarcinoma of the rectum with invasion of the muscularis but no evidence of malignancy in 8 lymph nodes." Three years later the patient complained of pain and swelling in the right lower leg. She died 2½ years subsequently from pneumonia. Autopsy (No. 58-206) showed metastatic carcinoma of the bones of the pelvis on the right and a large retroperitoneal mass adjacent to the osseous lesion.



Case No. 6, Fig. No. 4.

Case No. 7 – Fig. No. 5: G.J. – A 72-year-old male was operated upon for adenocarcinoma of the rectum. Roentgen study revealed a purely destructive area in the left femoral neck and intertrochanteric region. It is of interest to note that there was no evidence of metastases at the time of operation, the pathologist's report (No. S53-6317) being "adenocarcinoma with negative lymph nodes."

Other cases in our series showed metastases to ribs, clavicle, spine, femoral neck and skull.

Discussion

Metastases involving the skeleton in cases of colonic carcinoma is much more common than was previously supposed. This may be due to 1. A marked increase in the age of the general population in recent years. 2. The surgical approach to malignant lesions of the colon in the older age groups is bolder and many more cases are now operated upon than formerly.

The roentgen changes may be those of bone destruction, bone proliferation, periosteal reaction or varying combinations of these occurring simultaneously.

Papers were written in osteoblastic bone metastases



Case No. 7, Fig. No. 5.

from gastrointestinal and bronchial carcinoid and from bronchogenic carcinoma.

We wish to call attention to a very little appreciated and not emphasized in the literature aspect of osteoblastic skeletal metastases from colonic carcinoma.

Summary

1. The literature on skeletal metastases from carcinoma of the colon was searched and a review of autopsy records at the Boston City Hospital was made.

2. Skeletal metastases from carcinoma of the colon is more frequently seen today than was thought in the past.

3. Several cases are presented with their varying x-ray findings.

4. An emphasis is made on the similarity of some of these lesions to osteogenic sarcoma. Of course the patient's age and the history when available may help in the differential diagnosis.

Acknowledgement

I am very grateful to the late Dr. Max Ritvo, former Director of the Radiology Department, Boston City Hospital, who initiated and stimulated my interest in this subject and supervised most of the original work. This paper, however, was only very recently completed.

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Heart Blood Pool Scan in Pericardial Effusion*

DEMITRIOS NIKOLAIDIS, M.D.

In cases in which an enlarged heart silhouette is seen on chest films, it may be difficult and even sometimes impossible to distinguish between cardiomegaly and pericardial effusion. The EKG changes, the findings on the physical examination, the absence of x-ray findings of congestive heart failure associated with the enlarged heart silhouette on the x-ray and in many cases the fluoroscopy are helpful in the diagnosis of pericardial effusion. In some cases however, special radiologic studies like angiocardiography and radiography after intravenous injection of carbon dioxide may become necessary in order to establish the diagnosis. More recently ultrasound cardiography has been used.

Rezali et al (1958) first introduced and used radioisotope scanning in the diagnosis of pericardial effusion. Since in order to scan the heart, the isotope used should remain in the circulatory system long enough to permit an outline of the blood pool to be obtained, serum albumin tagged with I^{131} was the material first used. Later I^{131} sodium iodipamide was found to be preferable because of its relative rapid clearance by the liver resulting in considerable reduction of radiation to the patient. The scanning is started minutes after the injection and it may last for 40 to 60 minutes depending on the facilities and equipment available. The obtained image of the blood heart pool is not very sharp and several drawbacks were associated when these isotopes are used.

The radionuclide technetium-99m was introduced into clinical use by Harper et al (1964). Shortly thereafter, McAfee et al (1964) labeled human serum albumin with Tc 99m and used it in scanning of the heart pool looking for pericardial effusion. The same material was also used for the study of other cardiac diseases.

Technetium- 99m pertechnetate was used by Rosenthal (1966) and others later. Scintillation cameras, however, were necessary to obtain the images of blood pool.

At the Augusta General Hospital I^{131} sodium iodipamide was the isotope used and satisfactory heart scans were obtained with the Picker Magnascanner equipped with a 3 x 2 inch NaI crystal. With the acquisition, however of the 8-inch NaI crystal, in our Ohio Nuclear Unit, scanning of the heart pool was tried using technetium 99m pertechnetate and proved quite successful.

METHOD

Ten millicuries of Technetium 99m pertechnetate is injected intravenously. Since the detector in our unit is underneath the table the patient is placed in the prone position and a frontal scan of the heart is thus obtained in about 10 minutes time. The statistics are very good and a technique recording 1,000 counts per inch of travel is applied. The maximum count per minute are

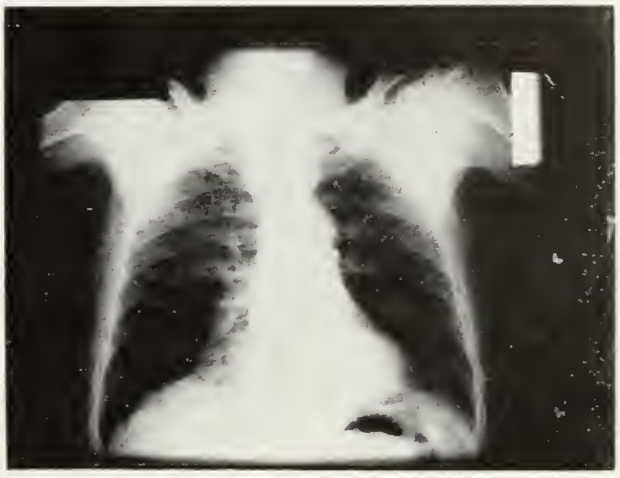


Fig. 1

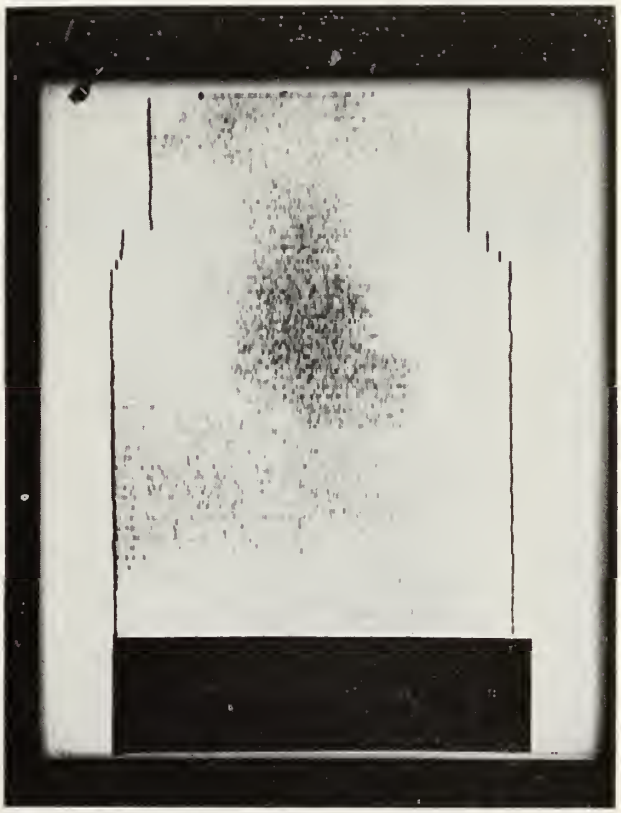


Fig. 2

Case No. 1, Figs. 1 and 2.

*From the Department of Radiology and Nuclear Medicine, Augusta, Maine 04330.

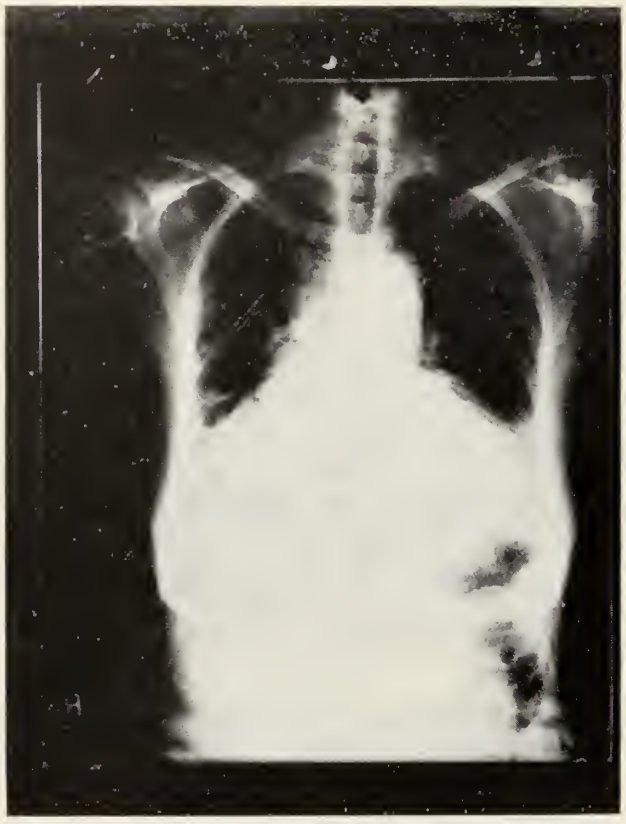


Fig. 3

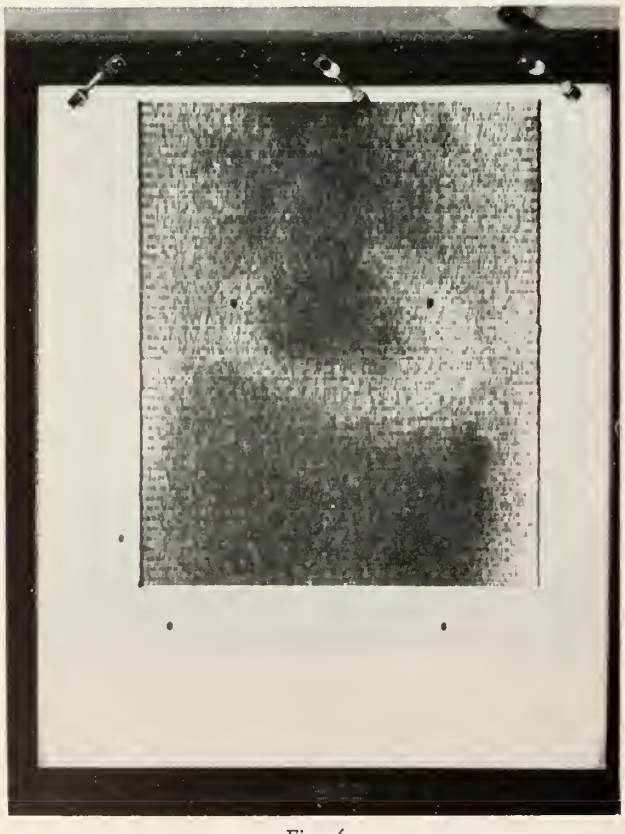


Fig. 4
Case No. 2, Figs. 3 and 4.

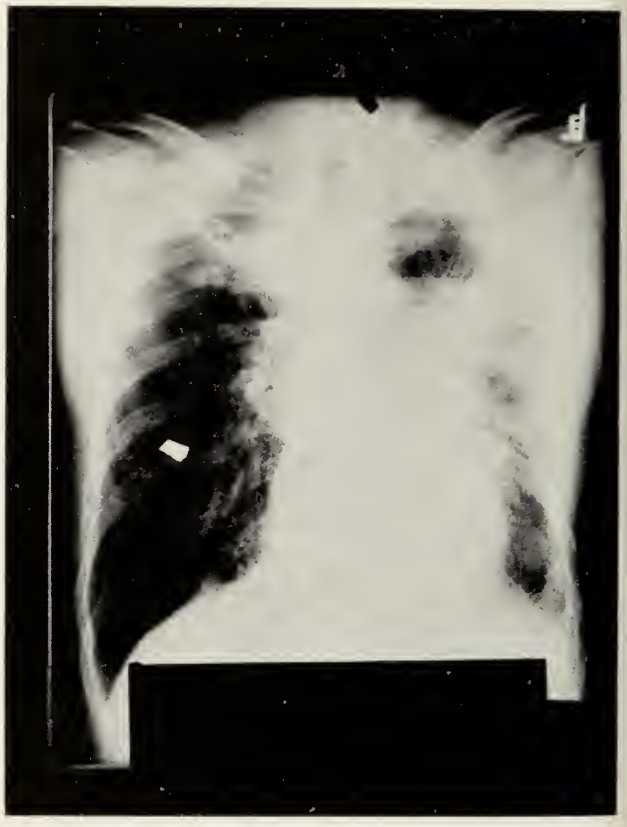


Fig. 5

between 100,000 and 140,000. No contrast enhancement is used which tends to produce a smaller image. A 199 hole collimator and the 8 or 5 inch crystal are used. The background cutoff is 10%.

Discussion

The heart pool scan obtained with Tc 99m is very easy. The excellent statistical data, fast speed, and the use of the monoenergetic Tc 99m result in a sharp heart pool image.

It is stated in the literature that more than 300 cc of pericardial effusion can easily and correctly be diagnosed with the heart scan. Special measurements were devised which are helpful in detecting the presence of smaller amount of fluid. The characteristic and diagnostic criteria of pericardial effusion on the scan are the following:

1. clear zone around the heart pool separating it from the lung and hepatic blood pools.
2. The ratio of the scanning image of the cardiac blood pool is less than 80% of the image of the heart in the chest radiograph (taken at 6 feet distance).
3. Large pericardial effusion produces elevation of the hilar vessels of the lung as seen on the scan.

Cases

To demonstrate the value of the heart scan three illustrative cases are very briefly presented.

Case No. 1 – Figs. 1 and 2 are the chest film and the scan

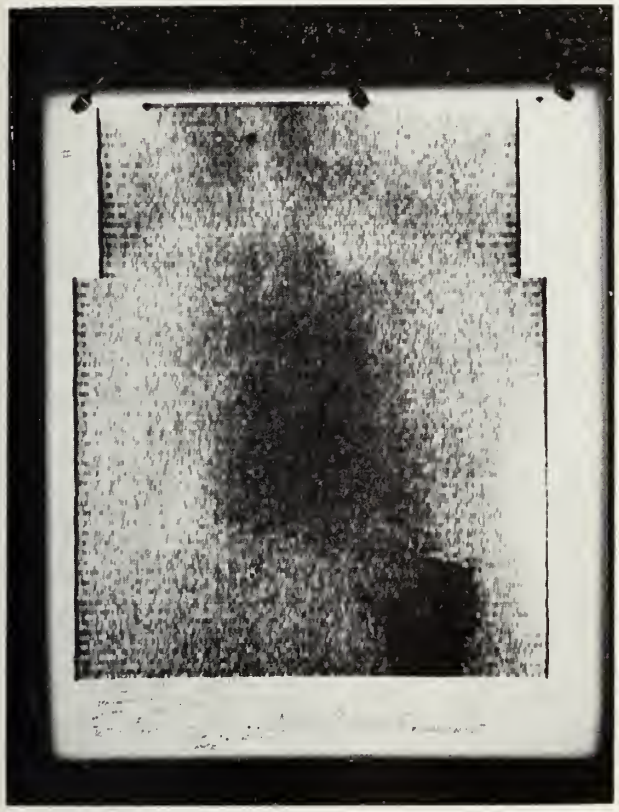


Fig. 6

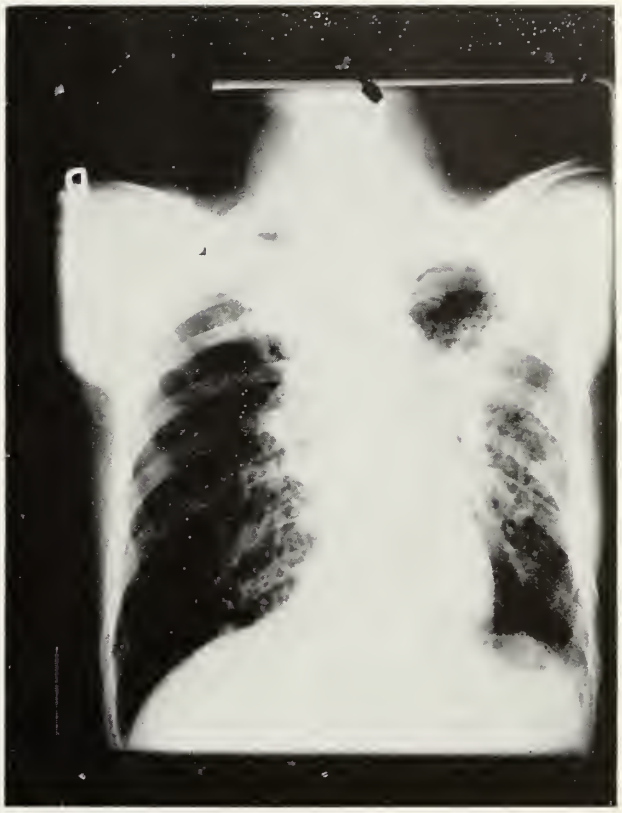


Fig. 7

Case No. 3, Figs. 5, 6 and 7.

of a normal individual. Note the relative correspondence of the sizes of the heart silhouette on the radiograph and that of the heart pool on the scan.

Case No. 2 – Figs. 3 and 4 are those of a proven case of pericardial effusion. Note the discrepancy in the size of the two images and the clear zone around the heart pool separating it from the hepatic and lung pools.

Case No. 3 – Figs. 5, 6 and 7. Figure 5 is that of a chest film of the patient with chronic tuberculosis. The heart silhouette was much larger on this film as compared with previous x-rays. Fluoroscopy showed good cardiac pulsations. The scan, Fig. 6, was negative for pericardial effusion. The patient was admitted at this time with shortness of breath and dyspnea. The patient's physician made the diagnosis of beri-beri heart. The patient was treated with thiamine. His heart size returned to normal a few days later, Fig. 7 and the patient became asymptomatic.

Summary

The blood heart pool scan is very safe, simple and very useful procedure in the diagnosis of pericardial effusion. It can help to define cardiac dilatation or hypertrophy. Tc 99m was tried and found to be very good in heart scans. The radiation to the patient is negligible when technetium 99m is used. The radioactive material is available at any time since a technetium generator is on hand at all times. The time required for the examination is very short, and makes the test easy, even for the very ill patient. The images obtained are good and of diagnostic quality. No expensive equipment like scintillation cameras are necessary.

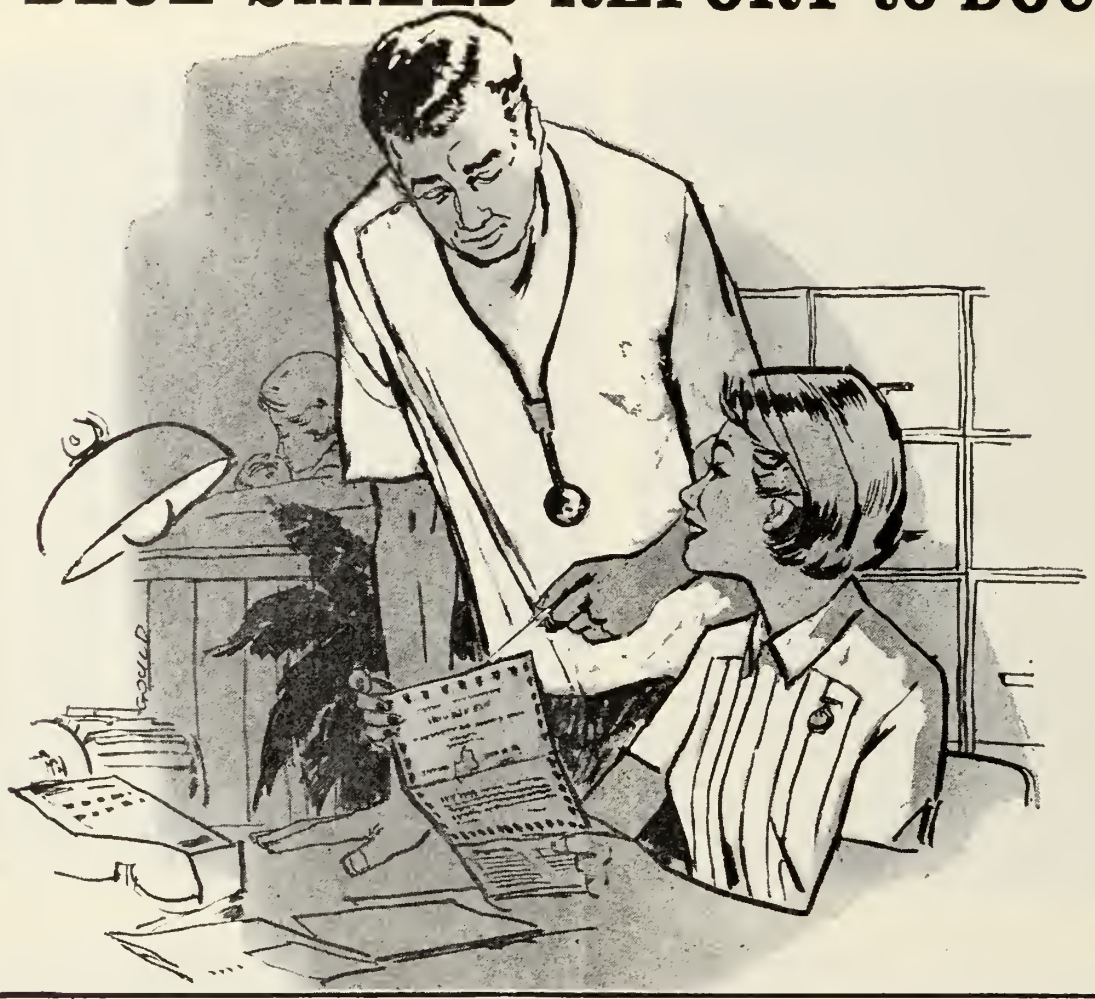
Acknowledgement

I am indebted to Dr. R. Mohlar for referring the presented cases No. 2 and 3 to us for the Heart Pool Scans.

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If one tablet is missed it is to be taken as soon as it is remembered and the next tablet at the usual time. If two consecutive tablets are missed the dosage is doubled for the next two days, then the regular schedule is resumed. If three consecutive tablets are missed a new tablet cycle is started on the eighth day after the last tablet was taken. For the best protection in the latter two instances instruct the patient to use another method of contraception until the next seven consecutive tablets have been taken. The possibility of ovulation increases with each successive tablet missed.

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Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

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Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

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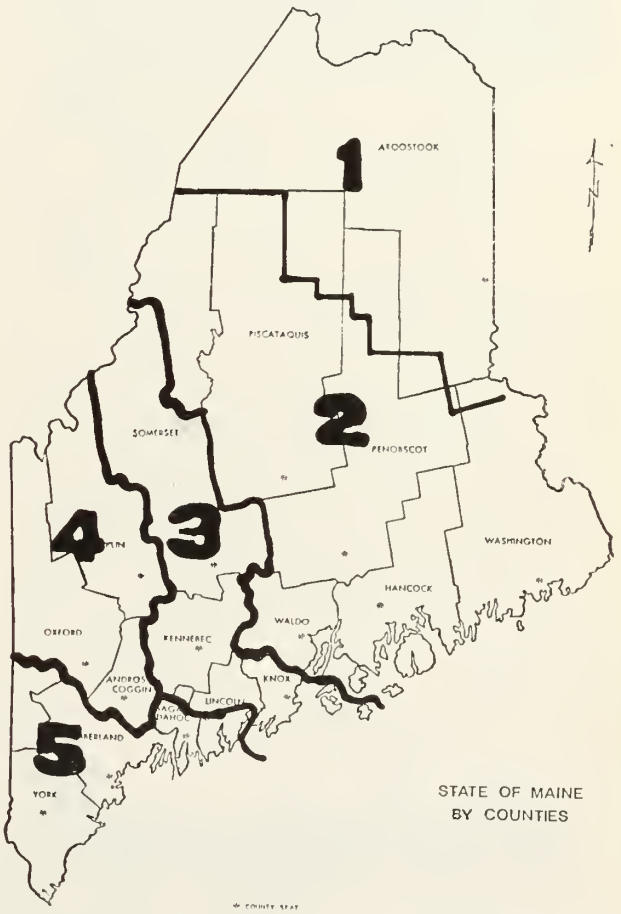
Department of Health and Welfare

Comprehensive Community Mental Health Program

JOHN B. LEET*

The questions raised most often relative to the Comprehensive Community Mental Health Program are "Why should communities have mental health programs?" "Don't we have state institutions to take care of the people who are mentally ill?" We do, but other facilities and services are also needed for the best interests of a large number of the patients. One of the most unhappy situations to be in is to pick up the phone and have a person on the other end requesting help which may not be available. Not long ago, I received such a telephone call from a physician who identified himself and then said, "I am at so and so's house. I have been treating their little boy. I have done everything I can possibly do medically. What the child needs now is psychiatric help. Whom shall we call? What services are available and how soon can he get treatment?" These are all stock questions, they are being asked all over the State. And why? Because evidently psychiatry is being more widely accepted by physicians who are willing to accept assistance in the care of the more difficult cases. Right now, the Bureau of Mental Health is developing a Mental Health Brief describing outpatient facilities and services by Mental Health Center Areas (see map) in line with Maine Comprehensive Mental Health Plan. Copies are available by writing to the Bureau of Mental Health, Department of Mental Health and Corrections, Room 700, State Office Building, Augusta, Maine 04330. We hope that this Brief will be widely distributed and utilized by those in the medical profession.

The new approach in the mental health field is to coordinate the mental hospitals with other components of the community program, such as clinics, rehabilitation, general hospitals, aftercare, and allied services for the patient and his family. In 1963 and 1964, Congress appropriated $8.4 million for grants to the states to stimulate state mental health planning. This planning program continues to be administered at the federal level by the National Institute of Mental Health. It is supervised in each state by the state's designated mental health authority. In Maine, it is the Bureau of Mental Health of the Department of Mental Health and Corrections. The planning program itself provides a broad interstate representation in its membership. A great many lay and professional groups have participated in the planning process. During the first two and a half years of study, extensive data were collected and analyzed by local and regional committees. Great interest was stimulated in



*Deputy Director, Bureau of Mental Health, Department of Mental Health and Corrections.

Maine. Let's look at some of the facts and figures about mental health that have been brought out.

The exact size of the problem of mental illness has not been measured for two reasons. First, no medically operational and generally accepted definition of mental illness has been devised, although much effort has been expended to this end. Second, identifying untreated cases of mental illness is extremely difficult. Statistics on mental hospital patients at a national level give an indication of the overall extent of the problem.

1. In 1903, one out of every 560 Americans was a patient in a public mental hospital. Between then and 1955 the ratio of patients to population almost doubled, rising at a fairly regular rate. By 1955, one out of every 292 Americans was a patient in a public mental hospital.

It was in 1950 that the number of patients exceeded half a million for the first time. Five years later, when the figures hit their peak, the number had grown to 559,000. From that year onward there has been a decrease every year, both in ratio and in actual number of patients. By the end of 1964 the number had fallen below half a million for the first time in 14 years. By the end of 1966 the figure had dropped further to 452,000; by then, one out of every 428 Americans was a patient in a public mental hospital.

During the eleven years from 1944 to 1955, patients in these hospitals *increased* by 23%. In the next eleven years, 1955 to 1966, the number *decreased* by 19%. This startling change of a trend that had existed as long as statistics had been kept becomes even more startling when viewed against the population growth of the United States. Between 1955 and 1966 the population of the country increased by 19%. If patients in public mental hospitals had increased during that period at the same rate the population of the country increased, today there would be 667,000 patients in these hospitals – but the actual figure is lower than this by 32%." Here's a good example of what has happened in one of our hospitals. In 1960 admissions to the Augusta State Hospital numbered 551 patients. The average total population for that year was 1749. Six years later, in 1966, admissions to the Augusta State Hospital were 1030 patients, yet the average total population had been reduced to 1558.

2. "Do these developments mean that the incidence of mental illness is dropping? By no means. Not only is the rate of admissions and discharges from public mental hospitals higher than ever before, but many more persons are now being treated for mental illnesses in other kinds of medical facilities, notably the short-term community general hospitals. A national survey carried out by the Joint Information Service in 1964 established that more psychiatric patients are admitted to general hospitals having separate psychiatric wards than are admitted to public mental hospitals; a great many additional persons are being treated for mental illnesses in several hundred general hospitals that do not have separate psychiatric wards but treat psychiatric patients on their regular medical wards."

This complex of services, in addition to the state hospitals, forms what we know today as the "Comprehensive Mental Health Center." As these centers are established, the people will be able to get help nearer home when they need it. For years, the mentally ill had been isolated from family, friends and the community and sent off to our state hospitals. With increased understanding of mental illnesses and the curative results of treatment and rehabilitation, it has become evident that the mentally ill can be treated in the community close to where they live, just as we treat the physically ill in their home community whenever possible.

Treatment in the community, therefore, is the basis for, as well as the pivot, in our new mental health program. It should have these characteristics: provide what is needed, be available as quickly as possible, as continuously as possible, with as little dislocation of the patient as possible, and offer as much social restoration as possible. Treatment should be provided for the patient while he is still on his job and while he is living at home.

A center is more than a building, though the federal funds authorized in the Mental Health Center Acts, are earmarked for construction. A center can start with a new facility or it can start with the services a community already has. It is essential that existing services be brought together so that the help one already provides will be related to all other elements of help the mentally ill require. As new facilities are established, to achieve a comprehensive community mental health program, the center will need to coordinate these into working relationships. The concept does not mean that all mental health services will necessarily be housed in a single building or even in a cluster of buildings. It does mean that wherever the services are based, they must be coordinated. One of the most crucial functions of the center is to be a nerve center implementing liasion among the services, for the patient and for the community. What will the center provide?

EACH CENTER IS UNIQUE – Each center should meet a particular community's special needs, as these have been analyzed by the planning committee and are part of the State's Comprehensive Mental Health Program, but in general, each center will offer a broad range of services for adults and children. The services insisted on by the federal government before construction or staffing funds are available include: inpatient and outpatient services, part-time hospitalization, emergency service and educational and consultative services. To achieve fully comprehensive status, the center may expand its services with additional federal assistance to

1. "Fifteen Indices" 1968 Edition, Table I, Patients in Mental Health Hospitals Pg. 7.

2. "Fifteen Indices" 1960 Edition, Table I, Patients in Mental Hospitals – Pg. 7.

include diagnostic services, rehabilitation, pre-care and aftercare, training for professional mental health workers and others and research and evaluation.

Under Maine's Mental Health Plan, five mental health center areas have been established. Each of these areas serves a population of between 75,000 to 200,000 persons. All of the services, especially the essential elements of services, should become available to all the people within an area. Initially, this will not be possible, but as time goes on, these services should, as noted, be available to all. The centers themselves, in accordance with the State's Mental Health Plan, will operate under various auspices, municipal, non-profit, private, or any combination of these.

With the establishment of community mental health services there will be no change in the basic purpose of the state mental hospital. Its function will remain the same, only we will emphasize that there be greater coordination and cooperation between the hospital and the community mental health services making up the total Mental Health Center Complex.

OTHER RELATED PLANNING PROGRAMS – The Community Mental Health Centers Program with its formal mechanism of the State Plan, its relationship to the Comprehensive Planning Program, and its implicit need for community planning to develop successful local programs, must relate other planning programs, in and out of government, at regional, state and local levels. It, therefore, seems advisable for those responsible for mental health center planning to consider the questions which will have to be answered through experiments in cooperation and coordination, as well as by trial and error. The people who are serving on the newly formed area boards are aware that the comprehensive health services program will soon be taking shape and they look forward to cooperating in an area-wide total health approach.

Mental Health planning must be related to other developments in the general medical field. The importance of coordination between mental health center plans and the Hill-Burton plans was accentuated by the special consideration given to the proposed centers to be affiliated with the general hospitals; we strongly advocate locating psychiatric services within the larger general hospitals at least. We have reason to feel proud of our mental health plan in our five mental health center areas, the recently established area boards and our funds for construction for our two mental health centers, our progress in providing staffing funds for these centers. We are also very much aware of the need for closer coordination between all these planning programs in order that we have a well-rounded means of meeting the health needs of the people here in the State of Maine. In the implementation of our present mental health plan, we have found that there are some resistances to recommendations which seem to threaten a specific program, whether it be state

Continued on Page 172



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Across The Desk

A New Emphasis

Washington, D.C. – "Improving the quality of life in this country requires that far greater national effort be devoted to reducing the incidence of preventable diseases, accidents and premature death."

This was the theme of a proposal to President Johnson to establish a Commission on Disease Prevention and Health Protection, appointed by the President, to make recommendations within a year.

The President was told that "to continue the present national emphasis upon treatment and after-the-fact remedies, as opposed to prevention, must be regarded as a failure of the health professions to adequately protect the public."

Said the plan's sponsors, headed by Sen. Warren Magnuson (D., Wash.), Chairman of the Senate Commerce Committee:

"Many of the diseases currently prevalent can be prevented entirely. Others can be detected and cured in the early stages. In some cases, it is simply a question of instilling awareness, recognizing symptoms or the importance of diet, and exercise. Technical personnel and automated laboratory and computerized recording procedures can utilize known techniques to operate comprehensive screening programs. These prevention and early detection programs can save money and conserve scarce physician time. People can be educated to expect health rather than to tolerate illness, to demand prevention rather than to admire belated treatment."

The statement continued:

"Benefits can be derived through legislation. Others will accrue through public and professional education. Still further benefits would come from financial support for special professional and non-professional training in the practice of preventive medicine. The following are just a few examples of things that can be done now. For example, we now have the authority to clean the polluted air over most of the major urban areas of this country.

"Other approaches include new methods of paying for and organizing health services. We, at present invest huge sums in medical care, through public and private support. The same means of coverage, however, such as Title XVIII, do not provide for 'health protection': there is no payment for periodic health appraisal on an out-of-hospital basis, with provision for follow-up care. This should include individual and group counselling services necessary for health maintenance, given by a physician or other health professional."

The Magnuson group said that "despite the convincing case for prevention, about two-thirds of all medical schools do not have departments of preventive medicine. This lack is appalling. We should at once encourage the establishment, or strengthening, of these departments in all medical schools, and emphasize a more realistic training program for the physicians of tomorrow." – From the Washington Office, American Medical Association, Aug. 6, 1968.

President

Maine Medical Association

1968 - 1969



Asa C. Adams, M.D.

Asa C. Adams, M.D. of Orono, Maine assumed his duties as President of the Maine Medical Association at the 115th Annual Session banquet on June 10, 1968. Dr. Adams served as Councilor for the Sixth District from 1964 to 1967, the last year as Council Chairman and as President-elect from 1967 to 1968.

Dr. Adams was born in Linneus, Maine on May 18, 1899, the son of George H. and Phoebe H. Adams. He was graduated from Ricker Classical Institute, Colby College, and received his medical degree from the University of Vermont Medical School in 1928.

He is a member of the American Medical Association, the Maine Medical Association and the Penobscot County Medical Association of which he is a past president. Dr. Adams served as Alternate Delegate to the American Medical Association from January 1960 to January 1961, and as Delegate from January 1961 to January 1965. He is also a Fellow of the American College of Surgeons, a member of the Surgical Staff of the Eastern Maine General Hospital and the St. Joseph Hospital in Bangor and a past president of the Eastern Maine General Hospital Staff.

Dr. Adams' interest in education is evidenced by the fact that he was a member of the Orono School Board for over twenty years during which time he was Chairman of the Building Committee when an extensive school building program was carried on. He was honored by the town in having the Asa C. Adams Elementary School named for him. He is also Chairman of the Orono School District.

Dr. Adams is a member of the Board of Trustees of Colby College and was awarded an honorary degree by the college, and he is Chairman of the Board of Trustees of Ricker College.

Dr. Adams is married to the former Vina Beatrice Parent of Haynesville, Maine and they have two sons, Marvin C. Adams, M.D., specialist in Otolaryngology in Portland, Maine and David Adams, M.D., a resident in Cardiology at the Vermont Medical Center, Burlington, Vermont, and seven grandchildren.

Elected at the 115th Annual Session of the Maine Medical Association

Rockland, Maine June 9, 10, 11, 1968

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Councilor, Second District
HARRY BRINKMAN, M.D., Farmington

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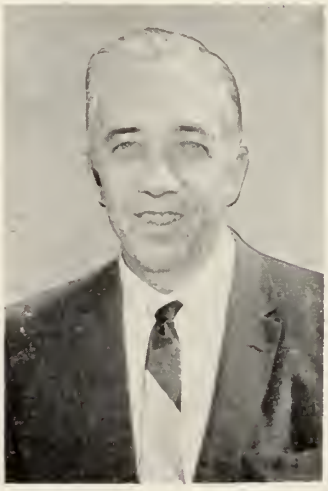
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DR. BRANCH



DR. GLASSMIRE



DR. ANDREWS



DR. COBB

Report of AMA Delegate

George W. Wood, III, M.D.

The Maine delegate to the AMA attended the 117th Annual Convention in San Francisco from June 16-20, 1968. In addition to being present at all House of Delegates meetings, he attended and participated in some reference committee activities.

Rather than recount or enumerate the various resolutions and reports, I would like just to emphasize three aspects of this particular meeting:

First, there was a "contest" for all of the four trustee positions on the Board of the AMA. Two of the encumbents were unseated; a third retained his seat; three candidates ran for the fourth position. A Massachusetts delegate, Donald Hayes, was running in the latter race. He fought a good battle, but lost in the run-off to Dr. John R. Kernodle of North Carolina. Nineteen hundred and sixty-eight may be an indicator of contests in each election for at least the immediate future.

The second aspect, which is also most encouraging, was that the candidates seem to have an increasing awareness of the broader social responsibilities that physicians and the AMA have to the entire public. This lessened self-concern is welcomed by this observer.

The third bright spot relates, in a sense, to the first two in that the House of Delegates passed, rather enthusiastically, the Massachusetts Resolution potentially eliminating discrimination within the AMA. This, of course, is a first step, with the second being the amendment to be brought in in December by the Judicial Council.

It would thus appear that the leadership potential within the AMA may be increasing, – at least, let us hope so.

I appreciate very much this opportunity to be your delegate. As you know, Maine was extremely well represented by its President, Dr. Asa Adams, who was in attendance at all the sessions. He lends true dignity to the Maine representation.

From the Secretary's Notebook

115th Annual Session of the M.M.A. House of Delegates

The 115th annual session of the M.M.A. House of Delegates was held at The Samoset, Rockland, Maine on Sunday, June 9, 1968 with an attendance of sixty-one delegates and alternates and twenty-five guests. Asa C. Adams, M.D., President-elect of the M.M.A., called to order the meetings of the House which were presided over by Robinson L. Bidwell, M.D., Speaker of the House.

Budget for 1969 – The proposed budget for fiscal year 1969 as presented at the Interim Meeting of the House of Delegates on April 7 by John D. Denison, M.D., Chairman of the Budget Committee was approved.

Nominating Committee – The report of the Nominating Committee, consisting of nominees for Standing Committees for 1968-1969 and for a delegate and alternate delegate to AMA to serve from January 1969 to January 1971 was approved. Published in the July issue on page 145.

Election of Speaker and Vice Speaker of the House of Delegates (For Meetings to be Held in 1969) – Robinson L. Bidwell, M.D. was elected Speaker of the House of Delegates and Charles R. Glassmire, M.D., Vice Speaker of the House of Delegates.

Resolutions and Recommendations

School Health Committee – The recommendations of the School Health Committee, which follows, were approved.

The School Health Committee met on March 28, 1968 at Holiday Inn, Westbrook, Maine with the following members present: Marion K. Moulton, M.D., Chairman; George W. Bostwick, M.D., Sidney R. Branson, M.D. and Lloyd G. Davies, M.D.

1. It was voted that the Association be asked to strongly recommend to the Commissioner of Education of the State Department of Education that a qualified person be found to become Director of Health Education, thus leaving the present Director of Physical Education and Health with physical education only; a position for which he is highly capable. This present director has expressed this need to the committee.

2. The committee recommends that increasing stress be made in all state institutions involved in the training of elementary and secondary teachers to more adequately equip them for the teaching of the various aspects of health (personal hygiene, health conservation, family living, mental health, drugs and tobacco, nutrition and diet, public health and sanitation, communicable diseases control, water and air pollution, first aid, and advertising claims evaluation, among others).

3. The committee also recommends that the resolution which follows, and which was drawn up by the Committee on School Health of the Maine Tuberculosis Association be endorsed and a notice of this endorsement be sent to the Health Council of Maine.

RESOLVED: That knowledge of the several aspects of health (personal hygiene, health conservation, family living, mental health, drugs and tobacco, nutrition and diet, public health and sanitation, communicable disease control, air and water polution, first aid, and advertising claims evaluation, among others), is of the utmost value to every person as an individual, and similarly, collectively on the part of its people to every community. Instruction in these matters should be presented to people while they are young when lasting habits and good attitudes can be developed. That these things be achieved successfully is of paramount importance to each generation and to its successor generations.

This education can be best carried out in the public school system of the state. Further, as the superstition and ignorance concerning health are still prevalent, and as many of the subjects requiring instruction are technical or highly sensitive (i.e., family living), health should be taught by trained and qualified instructors and not left to haphazard arrangements.

Therefore, be it further resolved, that the Health Council of Maine undertake a study in behalf of improved health throughout the state, in order to determine the status of health instruction in Maine schools, and to measure the quality of teacher preparation, as well as to plan a proper and sound program of health education for the State of Maine to recommend to the Governor, the Commissioner of the Department of Education, and the State Board of Education, and that it so instruct, and charge its Committee on School Health. To meet necessary costs of this project, the committee may use the research monies previously received from the Maine Multidisciplinary Health Study Committee as well as donations subscribed and received for the purpose from member agencies of the Council.

Resolution submitted by Cumberland County Medical Society – This resolution, which follows, was referred to a Reference Committee; Charles W. Capron, M.D., Chairman. The committee moved that the resolution of Cumberland County be accepted, and that a recommendation be made to appoint a Research Committee to administer and develop this concept. This motion was duly seconded and following considerable discussion was carried with six (6) "No" votes.

That a Research Fund be established by the Maine Medical Association. This fund to be a separate fund, and in no way be related to any other fund. The resources of this fund to be allocated under the direction of a committee appointed by the President of the Maine Medical Association for research purposes in the State of Maine. This committee will act on all applications for money.

That physicians write their Federal Congressman for further federal funds for research in Maine.

Hancock County resolution – A motion that this resolution, which was presented in April at the Interim Meeting, be adopted was followed by discussion concerning a *revision* of the *revision* in the Maternal and Infant Care program. Eliot T. Stadler, M.D. stated that "Hancock County has approved, in advance, the revision of the revision, and we are asking you to do the same thing." Members of the Washington County group, who are also concerned with this program, expressed approval of the final revision, whereupon the motion that the resolution be adopted was seconded and carried. The resolution as presented in April follows:

WHEREAS, the Maine Medical Association has requested suggestions for revisions of the Maternal and Infant Care Program, and

WHEREAS, the Maine Commissioner of Health and Welfare has agreed to accept the recommendations of the Maine Medical Association Committee concerning the Maternal and Infant Care Program; and

WHEREAS, the Hancock County Medical Society has approved a revision of the Maternal and Infant Care Program;

THEREFORE BE IT *RESOLVED* that the Maine Medical Association House of Delegates go on record as being in favor of the Maternal and Infant Care Revision as approved by the Hancock County Medical Society and suggest that the State of Maine Department of Health and Welfare adopt this Maternal and Infant Care revision for use in Hancock County.

Resolution submitted by Somerset County – This matter was referred to a Reference Committee, who brought in a resolution by Dr. George W. Wood, III, "which says many of the same things that the other* has but in a slightly different form."

WHEREAS, the demand for nursing services continues to exceed the supply and probably will for the foreseeable future, and

WHEREAS: The State of Maine is dependent upon its Schools of Nursing for the preparation of its nurses, and

WHEREAS: The majority of the nurses in employment today are graduates of hospital diploma schools, and these graduates have demonstrated over the years their ability to render the best possible care to the sick, and

WHEREAS: The Maine Medical Association also recognizes the vital need for the Graduate, Baccalaureate, Associate Degree and practical nursing graduates, and

WHEREAS: There is a continuing need for regional and state-wide planning for the development of nursing education programs;

NOW, THEREFORE, BE IT RESOLVED: That the Maine Medical Association reaffirm its support of nursing education, including Graduate, Baccalaureate, diploma, Associate Degree and Practical Nurse education programs;

AND BE IT FURTHER RESOLVED: That the Maine Medical Association acknowledge the contribution being made to our communities in the care of the

*As presented in April

sick by the hospitals that carry on diploma schools of nursing education, and that these schools be encouraged to continue to strengthen their programs, including broadening their relations with institutions of higher education:

AND BE IT FURTHER RESOLVED: That these institutions of higher education further develop policies by which hospital diploma graduates interested in further education may be admitted in advanced standing in the basic baccalaureate program:

AND BE IT FURTHER RESOLVED: That the State Legislature be requested to allocate funds to support nursing education in the hospital diploma schools:

AND BE IT FURTHER RESOLVED: That the Maine Medical Association inform all concerned parties, including the Maine State Board of Nursing, Maine State Nursing Association, Maine League for Nursing, and the Commission to Study the Nursing Needs of the State of Maine and the Commissioners of Education of its continuing interest and support for nursing education in the State of Maine.

A motion by the Reference Committee that this resolution be passed was duly seconded and the motion was carried unanimously.

Resolution submitted by Legislative Committee – Kevin Hill, M.D., Chairman.

WHEREAS, visual and auditory defects in children are common hindrances to learning, and

WHEREAS, the detection of visual and auditory defects in pre-school children is an essential prerequisite to their correction,

NOW THEREFORE BE IT RESOLVED: That the Maine Medical Association endorse and participate in the establishment of a sound, state-wide screening program for visual and auditory defects in pre-school children.

Following some discussion concerning financing of this program, it was pointed out that what the committee wants is our endorsement of this plan "our support but not our money" and the resolution was carried unanimously.



Dr. Stein, center, receives A. H. Robins Award from Dr. Hill, right, as Mr. Hubert Strom, A. H. Robins representative looks on.

Recommendations from the Washington County Medical Society – The following recommendations, presented at the April 29, 1968 meeting of the Washington County Medical Society, were rejected:

1) Relative to students in Canada going to Dalhousie Medical School and planning to come to the State of Maine to set up practice. Suggested that the present loans funds now available in the State of Maine be made available to these students.
2) Relative to a Medical School that might be utilized by both the State of Maine and the Province of New Brunswick, since neither alone is capable of setting up a Medical School separately.

The Journal of the Maine Medical Association – At the April 10, 1968 meeting of the Hancock County Medical Society "It was moved by Dr. Charles H. Knickerbocker that the County Society recommend that the Maine Medical Journal discontinue its publication and that the Maine Medical Association explore the possibility of allocating a lesser portion of the budget item for publishing to another New England area Medical Journal. This was seconded by Dr. Winston G. Stewart and was adopted by the Society. The redundancy and ever-rising expense of the Maine Journal were the objections to it. It was realized that some published outlet is needed for the Association's announcements and pronouncements."

At Speaker Bidwell's request, Dr. Hanley gave a detailed report concerning the financial setup of the Journal. Dr. Stadler stated that "we have been instructed to move the resolution and I so move it." This motion was not seconded and the resolution was dropped by default.

At this point, Dr. Russell M. Lane of Penobscot County stated "I think it is pertinent, not only to drop it by default, but also to extend to the Editor of the Journal our vote of confidence." (Approval was evidenced by the applause which followed Dr. Lane's statement.)

Election of Councilors – John F. Andrews, M.D. of Boothbay Harbor was elected Councilor for the Third District (Knox and Lincoln-Sagadahoc counties) and Norman E. Cobb, M.D. of Belfast, Councilor for the Fourth District (Kennebec, Somerset and Waldo counties). Both of these appointments are for a three-year term to expire in 1971.

Presentation of A. H. Robins Award – The Community Service Award for 1968, sponsored by the A. H. Robins Company, was presented to Ernest W. Stein, M.D. of Pittsfield by Paul S. Hill, Jr., M.D., President.

MEMPAC – George W. Wood, III, M.D., Chairman of MEMPAC, presented a progress report on MEMPAC, the Maine Political Action Committee which is composed of physicians and their families and is concerned with the selection and election of candidates. Dr. Wood urged support of MEMPAC — "It is not right or left at all; it is a coalition of ideas. It is a group of men who very, very strongly believe that this is the least contribution that we can make to our State Government, for $20.00 is not a great deal of a burden to most people,

and I think and I hope that we can use your $20.00 politically, very wisely." Dr. Wood will be pleased to send you more detailed information concerning MEMPAC.

Woman's Auxiliary to the M.M.A. – Mrs. Charles E. Skillin, President of the Auxiliary for 1967-1968, presented an excellent report of the activities of this group during her tenure of office. A major project of this group is the Maine Medical Education Foundation to which they contributed $1,634.86 during the past year. (Mrs. Skillin referred to the M.M.A. a request that the Auxiliary head a State Program of Venereal Disease Education this fall.)

Maine Association of Medical Assistants – Mrs. Toni Linnell, the immediate past president of this group, explained the purpose of this Association which consists of forty state organizations. Three counties are organized in Maine (Androscoggin, Cumberland and Penobscot) with a membership of fifty.

Mrs. Linnell said "As medical assistants, we hope through our Association to become better assistants to you, our employers." She closed her remarks with the following resolution that was made by the AMA at Los Angeles on November 28, 1962:

> That the American Medical Association wholeheartedly endorses the program and functions of the American Association of Medical Assistants and encourages every physician who has in his employ or under his supervision medical assistants who are eligible for membership in the Association to urge all of these assistants not only to join the Association but to actively participate in the programs.

Special Memberships – The recommendations for special memberships were approved. (The list of members recommended for Special Memberships was included in the Delegate's folder.)

Stenographic Record – A summary of the proceedings of the House of Delegates was sent to the county presidents and secretaries and to the delegates and alternates of each county society. (The complete report is on file in the Association's office in Brunswick, where it is available to any member of the Association.)



Charles F. Branch, M.D., left, newly elected M.M.A. President-elect, receives congratulations from Dr. Hill.

General Assembly

The General Assembly of the Maine Medical Association was called to order by the President, Paul S. Hill, Jr., M.D., at 4:30 P.M. on Monday, June 10, 1968.

Election of President-elect – At this session, Charles F. Branch, M.D. of Auburn was elected President-elect.

President's Address – Dr. Hill delivered his President's Address at this General Assembly.

ESTHER M. KENNARD
Secretary-Treasurer, M.M.A.

DEPARTMENT OF HEALTH AND WELFARE – *Continued from Page* 165

institution, special education, or a clinic. We cannot be completely satisfied with our present state planning. We must plan for services which will be needed in fifteen or twenty years based on our population projections and the geographical distribution of our population.

Although we are just getting a start on a foundation from which to work, the proposed programs will be outdated before we are able to implement many of the recommendations that have been made. We were quite concerned that the planning monies from the federal government, you might say *seed money,* were only good for a matter of two years after which there were no federal planning funds available for an ongoing program. We believe this is wrong. A plan is of little value without action or implementation. State planning should be ongoing and adapted to the new knowledges and the changing times. Any plan should provide organizational structure and funding to implement what has been recommended by the people who participated. We need to accept what has been recommended but also provide a means of realizing the plan's objectives. We will welcome any questions relative to any of these programs and what has come about since we started implementing this plan shortly after 1965. Naturally, a great deal depends upon the acceptance of such a program by the medical professionals.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Publication to be Released on "Cancer of the Breast — A Report on Research"

NEW YORK, N.Y. — The American Cancer Society announced the release of a new publication, "Cancer of the Breast — A Report on Research." Directed to the physician and the layman involved in the communication of health information, the 24-page brochure presents a brief summary of the most up-to-date information of this form of cancer — one which takes an annual toll of some 28,000 lives and which is the leading cause of cancer death among American women.

One of the more encouraging aspects of the breast cancer problem has proved to be that survival rates are high — if the disease is detected and treated in time. Thus, a study conducted over a 15-year period, ending in 1959, revealed that "the relative survival rate" — the ratio of life-expectancy among those with breast cancer which was localized at the time of treatment as against those free of the disease — was as high as 96 percent for the first year, 84 percent for one to five years, and 86 percent for five to 10 years.

These figures were true only for localized breast cancer; that is, before the cancer had begun its spread throughout the body.

Such findings reveal the value of early diagnosis and treatment.

One of the prime features of the American Cancer Society's public education program has been the encouragement of "breast self-examination" — an easily learned technique by which a woman can, once a month, check her breast for lumps and irregularities which may be indicative of cancer.

"Cancer of the Breast — A Report on Research" also summarizes much of the still obscure nature of the disease. Thus, it is known that in specially bred strains of experimental mice, a virus has been found responsible for breast cancer, transmitted to offspring through the mother's milk. Although an unmistakable virus in human breast cancer has not been found to date, complex and so-far unidentified particles have been retrieved from the tissues and milk of breast cancer patients which have not been found in those free of cancer.

Chemicals, too, have been shown to play a role in the causation of animal breast cancer, and may well play a similar role in the human. One variety of chemical substance — estrogens, or female sex hormones — has been shown to influence breast cancer in women beyond doubt.

As long ago as 1896, a British physician noted that those of his breast cancer patients who underwent ovariectomy — removal of the egg- and hormone-producing glands — demonstrated improvement. Since it is the hormonal substance produced by the ovaries which leads to such feminine characteristics as the growth of the breasts at puberty, it has been concluded that estrogen also encourages the growth of a tumor arising in the cancerous breast.

As is true of most types of cancer, cancer of the breast responds to treatment by surgery, radiation, or a combination of the two. In view of the breast's dependence on hormone-output, however, treatment by hormone-removal and/or hormone-administration can be useful in some cases. The ovaries themselves may be removed, as well as the adrenals and pituitary glands, which also affect hormone-production. Male hormones, female hormones, or a combination of both may also be given.

"Cancer of the Breast — A Report on Research" is the first of a series of booklets which will be produced by the American Cancer Society in the future, to provide medical, paramedical, and health education personnel with up-to-date information on cancer research for ultimate interpretation to the public. As such, the new publications reflect the Society's emphasis on the direct application of research: the translation of laboratory findings into clinical applications which can benefit the cancer-patient here and now.

American Cancer Society News Service Release

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

A Clinical Profile of Idiopathic Atrial Fibrillation

Although atrial fibrillation occurs most commonly in patients with rheumatic, hypertensive, and arteriosclerotic heart disease, this arrhythmia can occur in healthy individuals. . . . This paper is . . . intended to report observations in a group of patients who, because of strict selection, are felt to be a "pure" group of idiopathic atrial fibrillators.

Three major points seem to characterize idiopathic atrial fibrillation: the arrhythmia is usually easily terminated with bed rest or conventional drug therapy, or both; . . . the precipitating event relating to the onset of the arrhythmia is often some type of vagotonic maneuver, for example, coughing, vomiting, nausea, pain; this recurrent arrhythmia is apparently quite benign, as manifest by the absence of electrocardiographic changes consistent with myocardial ischemia, by no X-ray changes in heart size or pulmonary vascular pattern during the arrhythmia, by no history or evidence of pulmonary or arterial embolization, by its occurrence in a healthy population, and by the absence of serious cardiorespiratory symptoms or signs during the arrhythmia. . . .

These findings suggest that atrial fibrillation of undetermined cause in a patient without heart disease may well be a functional abnormality rather than a disease process, particularly if the arrhythmia is recurrent and paroxysmal.

Submitted by Jacob B. Dana, M.D. Maine Heart Association.

Reference: Peter, R. H., et al, Annals of Internal Medicine, Vol. 68, pages 1288-1295, 1968.

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* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. Now isn't that a good idea in an iron-containing hematinic?

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One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

Prescribing information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

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Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

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MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



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METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

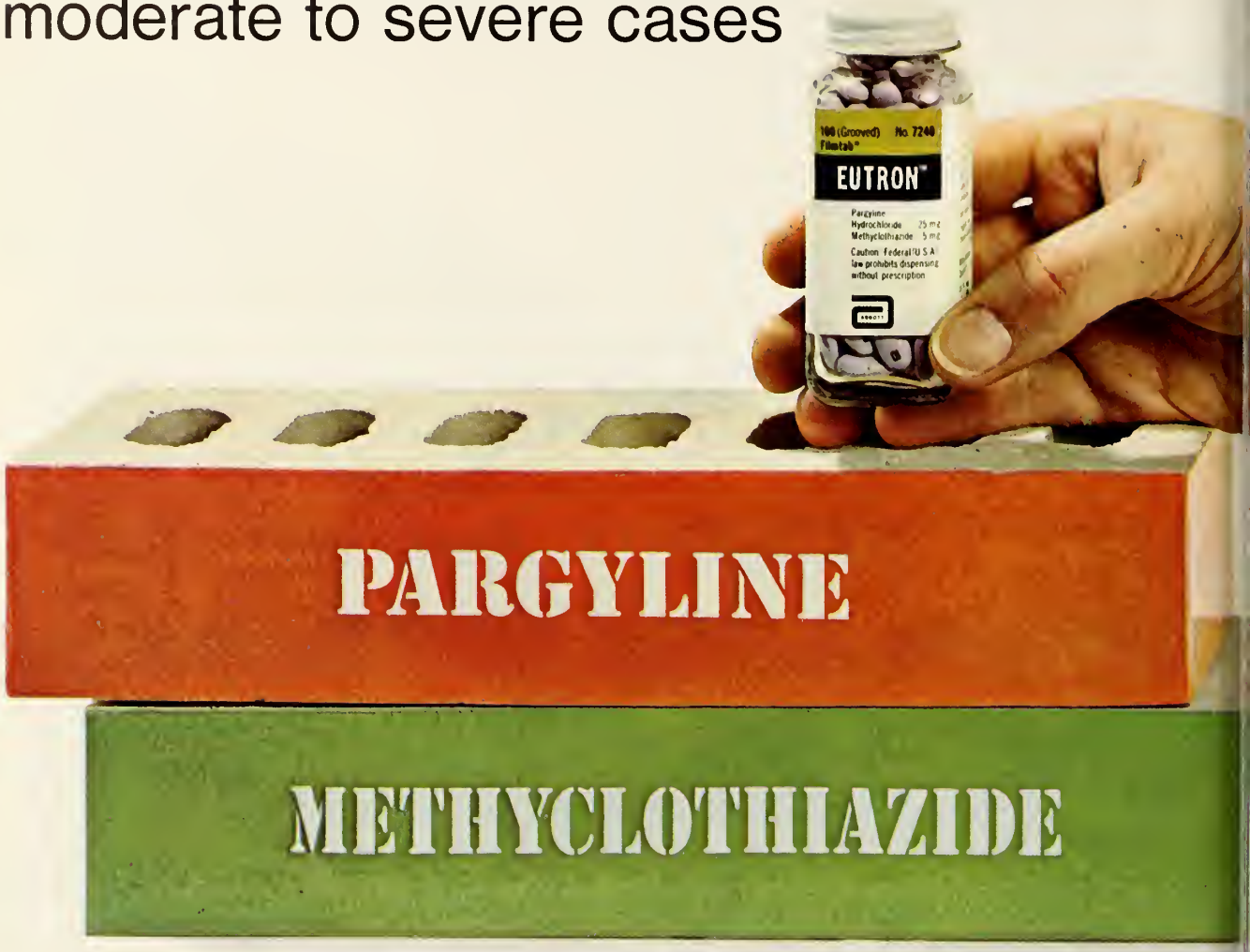
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Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

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METHYCLOTHIAZIDE

Each tablet contains Methyclothiazide 5 mg. with Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains Pargyline Hydrochloride 25 mg. with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage; caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

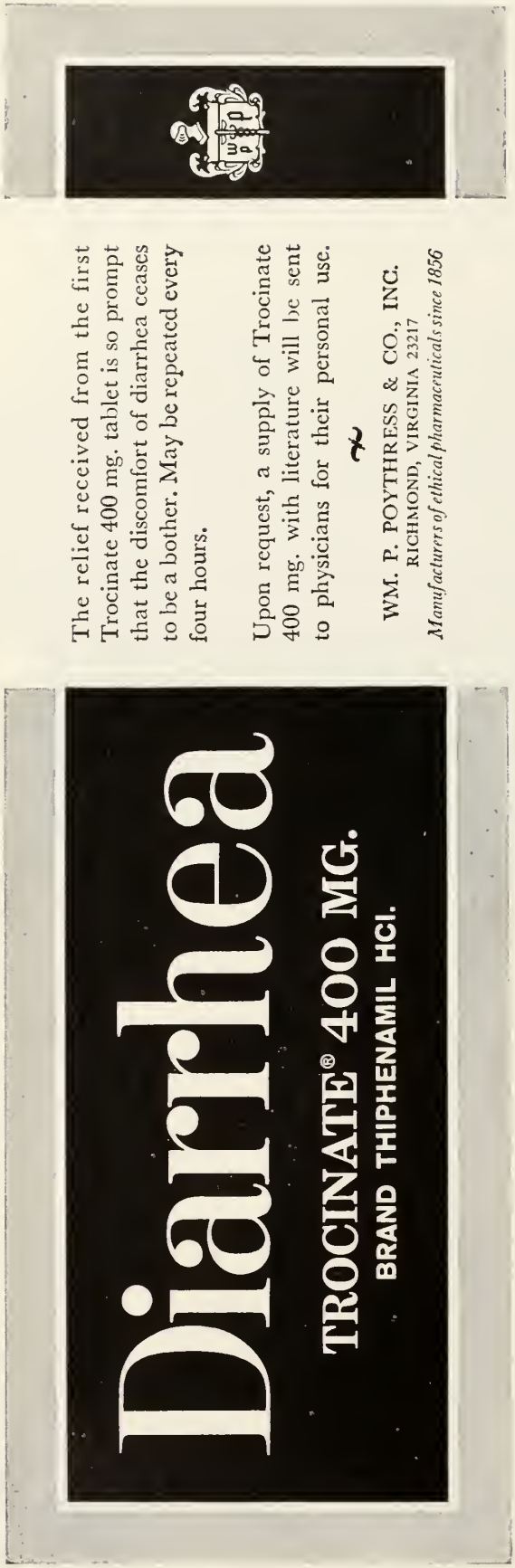
Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804436R

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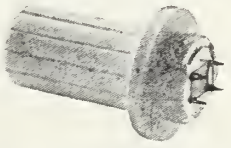
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Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

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Tandearil® in Osteoarthritis
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.
Warning: Tandearil is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.
Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reacti-

Pain Break" for an osteoarthritic.

Tandearil can usually ease it.

At 46, her knees still look good on the outside. But inside, there may be the familiar picture of osteoarthritis.



If aspirin doesn't help, Tandearil often will. Pain and stiffness begin to ease up in 3 or 4 days. You can often maintain response with a daily dose of only 1 or 2 tablets.

Of course, Tandearil is not for every osteoarthritic. Select your patients carefully and follow them in line with the Contraindications, Precautions, Warning, and Adverse Reactions listed below.

But for many aspirin-stubborn osteoarthritics, let Tandearil ease the unwelcome pain breaks of osteoarthritis.

Tandearil®
oxyphenbutazone

a latent peptic ulcer. The patient should structed to take doses immediately after s or with milk to minimize gastric upset. rash occasionally occurs. If it does, ptly discontinue the drug. Agranulocy-, exfoliative dermatitis, Stevens-Johnson rome, Lyell's syndrome (toxic necrotiz-pidermolysis) or a generalized allergic ion similar to a serum sickness syn-e may occur and require permanent lrawal of medication. Agranulocytosis occur suddenly in spite of regular, re-ed normal white counts. Stomatitis, sali-gland enlargement, vomiting, vertigo and or may occur. Leukemia and leukemoid ions have been reported. While not defi-attributable to the drug, a causal rela-hip cannot be excluded. Thrombocyto-penic purpura and aplastic anemia may occur. Confusional states, agitation, head-ache, blurred vision, optic neuritis and tran-sient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hyper-sensitivity, angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

For complete details, please see full Prescribing Information.

Geigy

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily. In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and other factors influencing drug response. Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

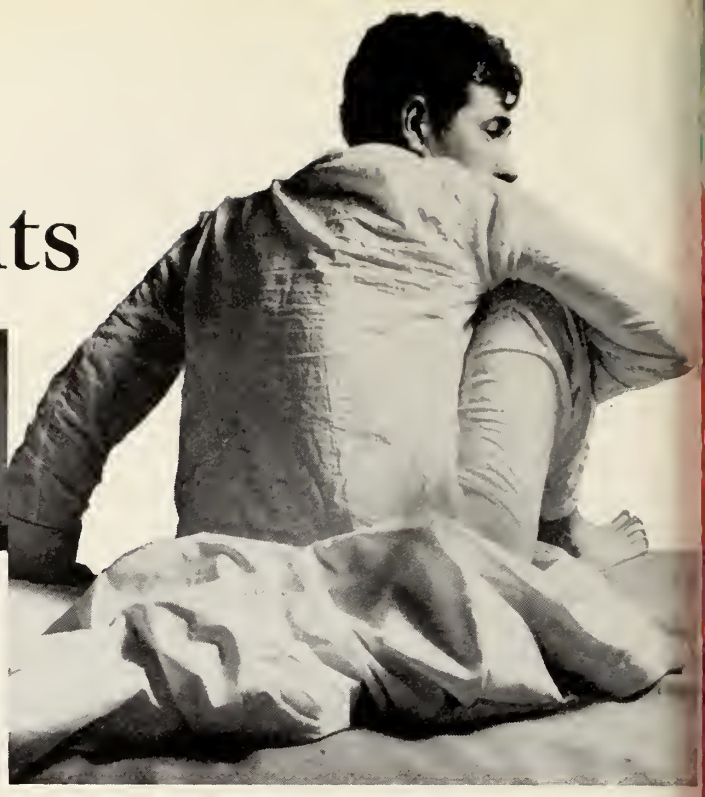
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TA-5806AR

Open-eyed nights





Too tense to sleep...too tired to get up. Early to bed, late to rise, and not much sleep at that, the patient with severe psychic tension is understandably tired. His tensions and overreactions to the day's stresses may interfere with proper sleep, and his inability to face the day's activities can produce an ever-worsening pattern. By relieving psychic tension, Valium® (diazepam) facilitates sleep, particularly with an h.s. dose. In many patients, the usefulness of Valium has been demonstrated in relieving psychic tension alone or with secondary depressive symptoms. Valium is generally well tolerated and, with proper maintenance dosage, usually does not unduly impair mental acuity or ability.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50, 100 and 500.

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Valium®(diazepam)

useful for the relief of psychic tension, alone or with associated depressive symptoms

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BOSTON
8 OCT 1968

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The Maine Medical Association

VOLUME 59 SEPTEMBER, 1968 NUMBER 9

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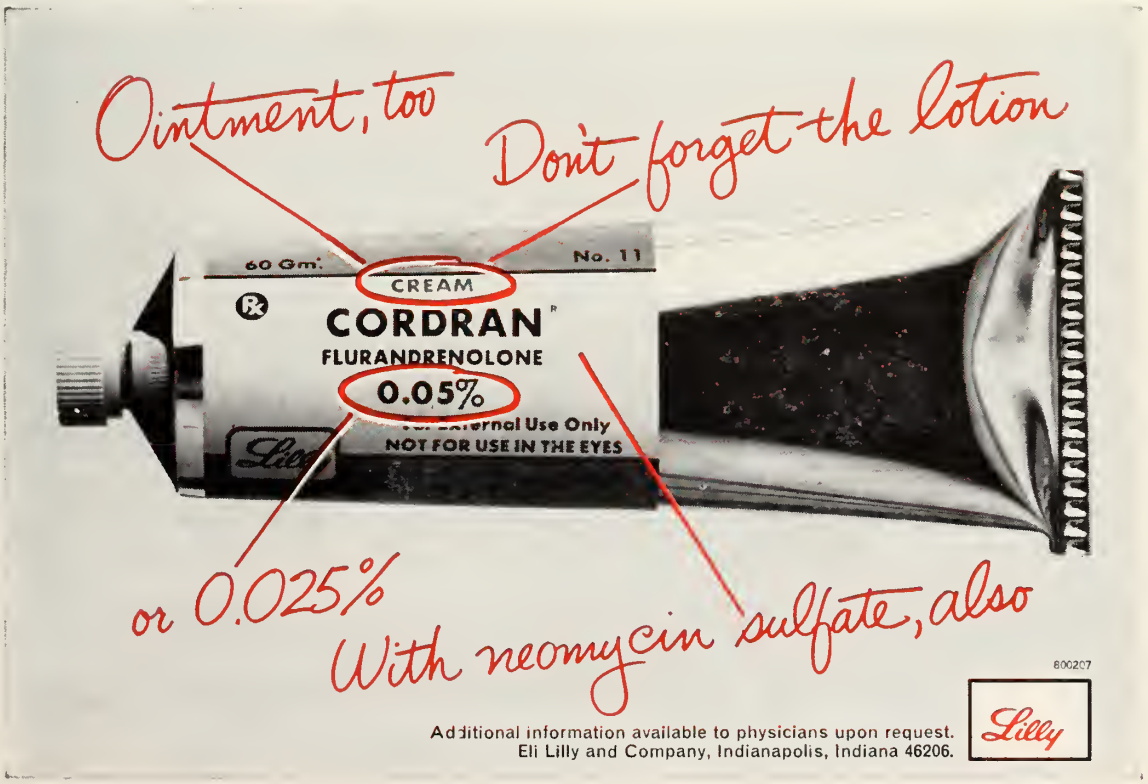




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Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

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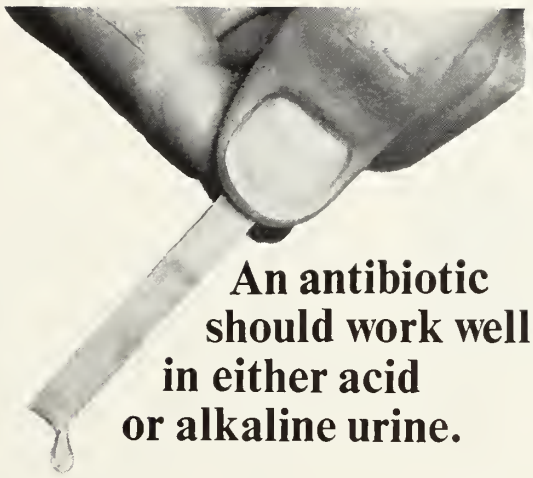
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system – anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin – maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney – rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions–urticaria, angioneurotic edema, anaphylaxis. Teeth – dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Capsules: 150 mg; Tablets: film coated – 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

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1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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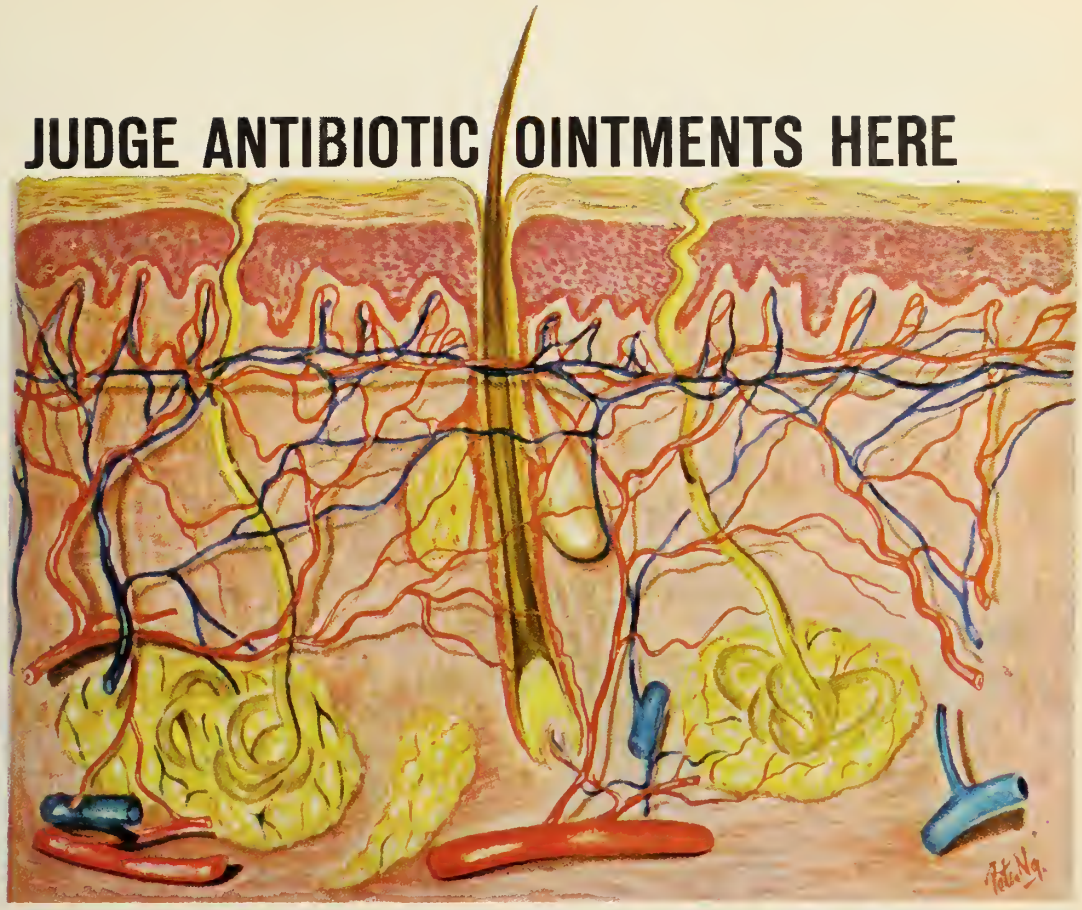
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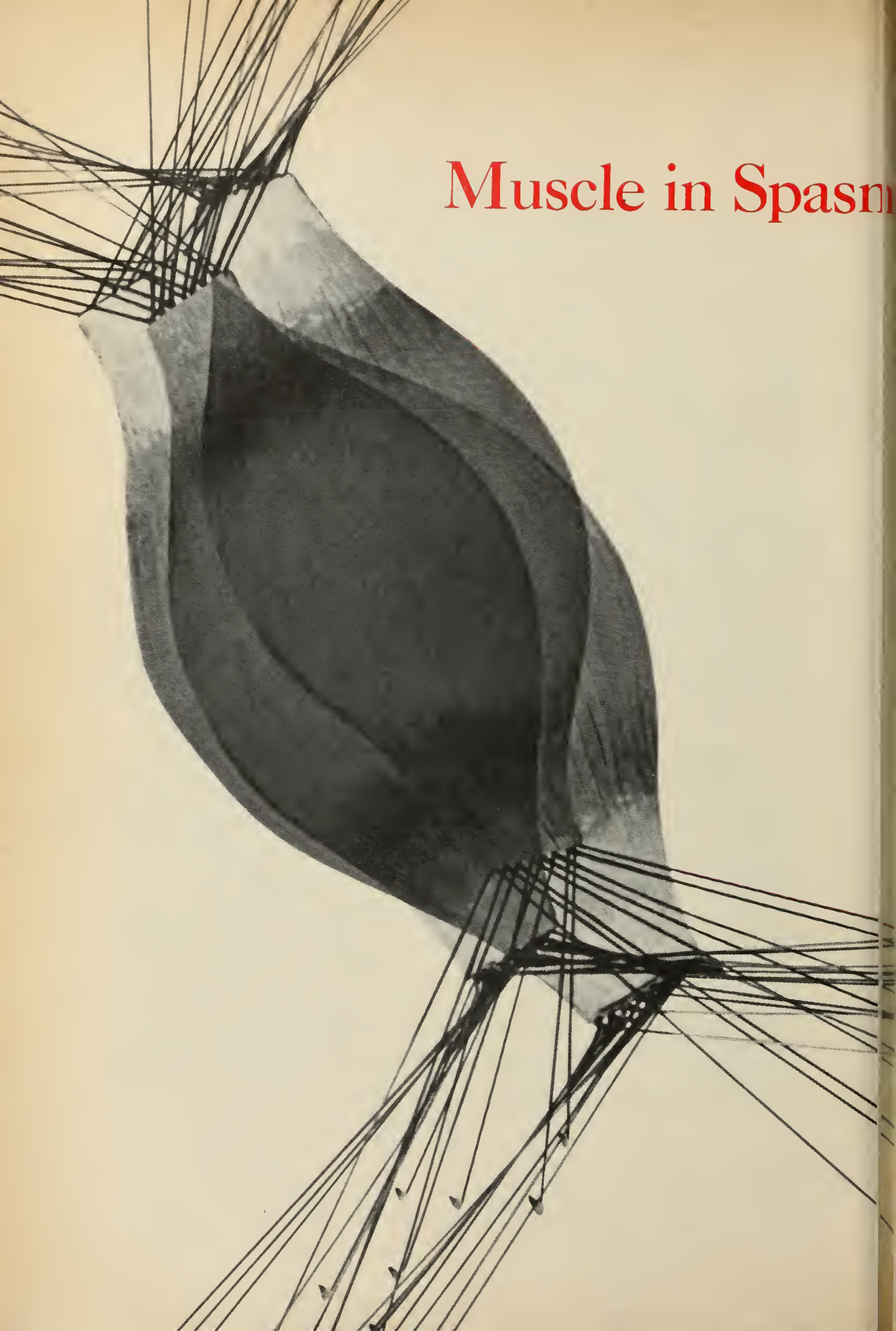
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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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2-mg, 5-mg, 10-mg tablets

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Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Painful Shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)R 66-070-A

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Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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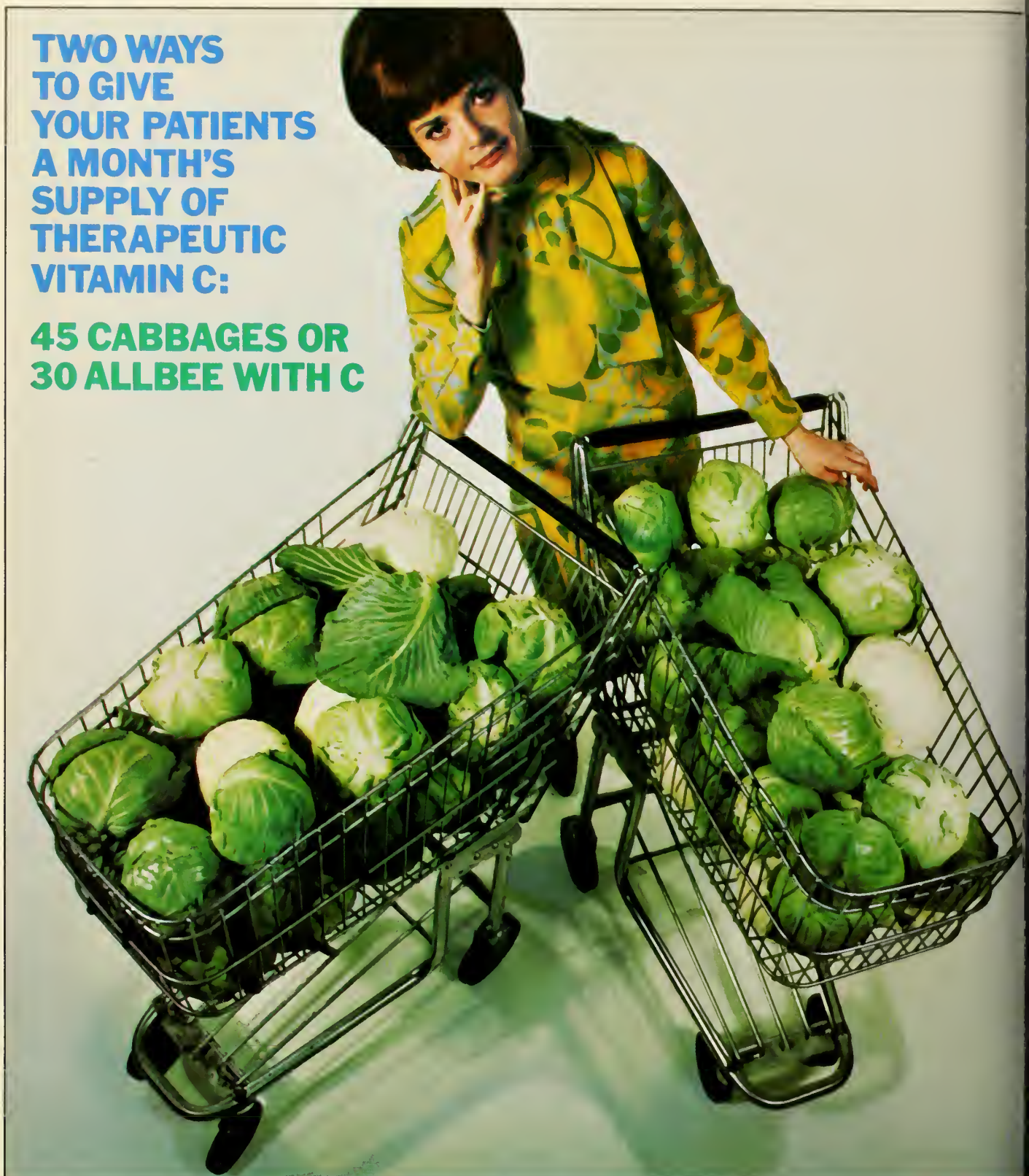
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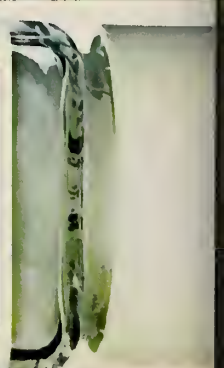


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Side effects include drowsiness; dizziness; nausea; excitement; hypotension; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of schizophrenia which may require phenothiazine tranquilizer therapy; epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration or, rarely, transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of the mouth, blurring of vision, urinary retention, constipation; paralytic ileus; jaundice; agranulocytosis.

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Prevention of Stroke:

Early Recognition of the Susceptible Patient

E. Charles Kunkle, M.D.*

Such a goal as is set by the main title above is, in 1968, obviously unrealistic. It implies in medical care more than any physician can yet expect to deliver. He can, however, offer hope to some stroke-susceptible patients, those who, by symptoms and sign, are in jeopardy of imminent brain injury from vascular disease. In certain of these, medical or surgical measures, applied in time, may avert or long postpone a major disability.

The aim of this discussion is to outline briefly the major varieties of cerebrovascular disease which, if found early, are potentially treatable. Recognition of these disorders depends largely on a thorough history and physical examination. Special techniques and laboratory tests may be required to establish the full anatomic diagnosis but the most important ingredient in the whole process is the physician.

The term "stroke" is here used loosely, as it commonly is, as a convenient brief handle for various neurologic deficits resulting from disease of the vessels (almost always arterial)serving the brain. Many but not all cerebrovascular lesions begin abruptly and reach a peak rapidly; in a few the course is one of gradual progression over days, weeks, or months, or by small irregular steps. There is also remarkable variability in the severity of strokes; at one end of the spectrum is sudden and devastating collapse into hemiplegia and coma, and at the other a minor and fleeting deficit in movement, sensation, speech or other mental function. Of the many underlying causes, the major ones, all relevant to this discussion, are cerebral ischemia (with or without actual infarction), embolism, or hemorrhage.

Surgical Prevention

The surgeon's role in prevention of cerebrovascular disease concerns two large clinical problems: extracranial arterial occlusive lesions and intracranial aneurysms. His interest in the former stems from observations made more than half a century ago by Hunt and others.[1] These early data, confirmed repeatedly in recent years, indicate that in many patients with strokes due to atherosclerotic disease, the principal sites of arterial narrowing are in one or more of the major vessels in the neck, particularly the carotids. In perhaps nearly half of patients with such large vessel disease, warning symptoms in the form of transient ischemic attacks precede the development of prolonged or even permanent brain damage (a full stroke). Such transient episodes are often recurrent, in close succession or widely separated in time. Recent evidence suggests that in some instances the episodic attacks result from intermittent release of soft fibrin or firm atheromatous micro-emboli from plaques in neck vessels;[2] in others the symptoms reflect irregular fluctuations in systemic arterial pressure or mechanisms as yet obscure.

In the analysis of transient ischemic attacks, impairment of flow in the carotid system may be inferred from the following symptoms, singly or in various combinations: unilateral weakness or numbness, dysphasia, confusion and monocular blurring or loss of vision. Involvement of the vertebral-basilar system may be inferred from bilateral weakness or numbness, ataxia of gait, dysarthria, dysphagia, vertigo, tinnitus, hearing loss, giddiness (even progressing to syncope), diplopia, homonymous visual loss, or occipital headache. Since any of this list of symptoms can also result from diverse other mechanisms and diseases, accurate diagnosis obviously requires thoughtful assessment of the full history and examination.**

When the narrowed sclerotic segment of a neck artery is detected and is surgically accessible, endarterectomy, grafting or by-pass procedures may be warranted. It is

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now abundantly clear that by modern surgical skills, such reconstruction is technically possible and that the improvement in local blood flow which results may persist for many months or even years. The clinical benefits, however, are variable, for the major circulatory insufficiency actually responsible for the patient's symptoms is sometimes elsewhere in the neck or head, perhaps beyond operative repair; spontaneous improvement, moreover, may occur at any time. Accordingly, appraisal of surgical results must be cautious rather than uncritical.[5] It must be based on what happens to the patient's brain, not simply on whether the previously narrowed vessel is now made fully patent. Final answers can come only from clinical experience carefully recorded and evaluated, describing the pre- and postoperative course of large series of patients, for comparison with the natural history of these disorders in non-operated patients.[6] Such comparative studies, on a cooperative basis, are still in progress, the results to be released late this year.[7]

Surgical experience with the management of bleeding intracranial aneurysms has a longer history, yet many questions remain unanswered. Decisions are difficult as to which patients most clearly need operative intervention and which method is most effective in diminishing the risks of recurrent, often fatal, hemorrhage.

Medical Prevention

The principal issue in the medical management of the stroke-threatened patient concerns the use of long-term anticoagulation, as with the coumarins (e.g., Coumadin®). In general this method is now considered only for the individual with clearly defined recurrent transient ischemic attacks, especially if no surgically-reparable arterial lesion is found. Several contraindications to anticoagulation must be recognized, considerably restricting the number of patients suitable for this form of therapy. They include: hemorrhagic disorders; history of past bleeding ulcer, hepatic or renal insufficiency; severe hypertension; relative inaccessibility of competent laboratory facilities or medical supervision; and unreliability of the patient because of mental deficit, emotional illness or other factors.

The prevention of atherosclerosis, clearly the central and unsolved problem, lies beyond the scope of this paper.

The Ideal Candidate for Preventive Measures

The foregoing comments lead to suggestions for the selection of patients who must clearly need specialized study, such as full neurological evaluation, measurement of retinal artery pressures (ophthalmodynamometry), cerebrospinal fluid examination, electroencephalogram, and cartoid-vertebral arteriography, to determine what surgical or medical procedure may be of aid. On the basis of data thus far available, and subject to revisions as world-wide experience expands, the candidates most likely to profit from such full diagnostic studies are:

1. The patient with transient recurrent ischemic attacks, regardless of whether symptoms point to the carotid or the vertebral-basilar system.
2. The patient with cerebral embolism, either singly or in repeated attacks, to be suspected in those with known rheumatic valvular disease or past myocardial infarction, with atrial fibrillation or other major cardiac arrhythmias, or with symptoms and signs suggesting embolism to other regions of the body.
3. The patient with acute subarachnoid hemorrhage.

The Doubtful Candidate for Preventive Measures

1. The patient who has had a completed stroke, recent or old, with more than mild residual disability.
2. The patient with a progressing stroke (stroke in evolution) represents a particularly difficult problem, for in this situation intensive diagnostic studies carry special hazards and often yield little benefit. Relatively few such patients can be helped by emergency correction of any carotid stenosis. Exceptions may be the instances of fresh carotid occlusion as an immediate sequel to arteriography.
3. The patient with an asymptomatic neck bruit of arterial stenosis is perhaps best managed by close periodic supervision in search of the first hint of brain ischemia, then leading to full study, for many patients with such bruits remain free of symptoms for a long time.

The Non-Candidate for Preventive Measures

1. The patient already gravely disabled by a recent or old stroke or other illness.
2. The very old and feeble.
3. The patient known to have a major progressive disorder, e.g., malignant disease or advanced cardiac, pulmonary, renal or hepatic disease.

Attention focussed too narrowly on the arterial disease underlying the stroke or near-stroke, and on what might or might not be done for it, should not divert the physician from essential general medical measures in the care of the patient. These should stress maintenance of adequate blood pressure and airway and prevention or correction of dehydration and electrolyte imbalance. The contributions of physiotherapy and rehabilitation are also of major importance, but are not pertinent to the topic of this paper.

Summary

A prime responsibility for the physician dealing with cerebrovascular disorders is the early detection of pa-

**Details of the features and differentials diagnosis of carotid and vertebral-basilar arterial disease are concisely presented in the recent monograph by Toole and Patel[3] and the pamphlet by Toole[4] (published by the American Heart Association, 44 E. 23rd St., New York, N.Y. 10010).

tients with premonitory symptoms and signs of brain damage. In certain of these, arterial reconstruction or other measures may prevent or delay a major cerebral deficit and permanent disability. Nearly as important is his recognition of the patient in whom the neurologic damage has already been done and for whom special arteriographic and other studies are likely to be fruitless.

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POSTGRADUATE PROGRAMS AT UNIVERSITY OF CALIFORNIA SCHOOL OF PUBLIC HEALTH

The Division of Maternal and Child Health of the University of California School of Public Health at Berkeley announces the following postgraduate programs for pediatricians, obstetricians, and other physicians interested in receiving training in the field of Maternal and Child Health. These programs all lead to the degree of Master of Public Health. Tax-exempt fellowship support is available.

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The Multiply Handicapped and Mentally Retarded Child. A 21-month academic and clinical program in planning, organizing and operating community services for children with multiple handicaps, including mental retardation. This program is primarily for Board-certified or Board-eligible pediatricians, or for physicians on the staff of institutions for the mentally retarded or handicapped children.

Career Development Programs. Three-year academic and residency programs consisting of one year of academic training leading to the degree of Master of Public Health combined with residency training in Pediatrics or Obstetrics-Gynecology. The training emphasizes planning, organization and operation of comprehensive health programs.

Applications are now being accepted for the group entering in July or September, **1969**. For information, write to Helen M. Wallace, M.D., School of Public Health, University of California, Berkeley, California 94720.

Job Corps: A Psychiatrist's View

Richard A. Levy, M.D.

The nation's largest Women's Job Corps center has been located at Poland Spring, Maine for the last two years. Many Maine citizens know the center is located on the site of the former Poland Spring Inn and have strong feelings regarding the cost of the program. Very few know what the program is, what problems the girls being educated and trained there have had and will have, and whether or not the taxpayer is actually getting his dollar's worth in helping the center's young women reach the goal of equal opportunity and employment.

First there are some facts of interest. The Poland Spring Job Corps Center is run by the Economic Systems Corporation for the Office of Economic Opportunity. The administrators and directive staff, therefore, represent 'business', and are subject to the scrutiny of the government through an on-center representative of O.E.O. as well as inspection teams and visiting individuals. The teachers, vocational instructors, social workers, activity workers, physicians and nurses have been recruited both locally and from around the country. They are all employees of Economic Systems Corporation, not the Federal Government. There are approximately one thousand young women at the center between sixteen and twenty-one. The average ratio over the two years has been fifty-seven percent Negro and forty-three percent White. The majority of the girls have not graduated from high school. Those that have, for the most part, appear to have received social promotions. All girls, with rare exception, are from a background of true poverty. Many are from farms belts and Appalachia as well as the urban ghettos. During the first year, Poland Spring had girls from all over the United States. As an economic measure, the girls now come from the eastern half of the nation only. There are many other centers run by a variety of business organizations (e.g. IBM) located in the Midwest and on the west coast. Not all centers are located in remote rural areas like Poland Spring, many being in the cities or suburbs. The basic idea was to remove these young women from their surroundings of poverty and their families and send them to a center where education and vocational training could be pursued without the interruption of personal worries and the demands of poverty.

During the two years between April, 1966 and June, 1968 I served as psychiatric consultant to the Poland Spring Job Corps Center. Therefore, I was provided with the unique opportunity of participating in the "war on poverty" while developing a greater understanding of the personal problems and individual needs of disadvantaged youth. My consultation time was equally divided between direct service to corps women and consultation to staff (teachers, counselors, administrators, medical, etc.).

The first one and one-half year's experience left me with several impressions that required objective study. For example, there appeared to be an unusually low rate of frank psychiatric disease, especially in view of the deprived background most of the girls had come from and the chaotic childhood experiences many had had. The Negro girls did not seem to suffer feelings of inferiority or being second-class, a large concern during the early program planning. Academic and vocational training notwithstanding, few of the girls I have talked with had an adequately mature or sufficiently commonsensible approach to their future lives, i.e., in the planning of where they would work, live and how they would handle their numerous family problems. The question was therefore raised as to whether supplementary basic education and vocational training would suffice to achieve the massive rehabilitative effort required. It was also the impression that Poland Spring was too isolated, too countrified and quiet for most of the girls who are in the prime or exuberance of adolescence and for the staff who would normally require greater stimulation from their non-working environment.

There are also several questions to be answered: Why so many drop-outs (30% the first month, another 10% the next two months)? Why were teachers of academic subjects so frustrated in their attempts to reach their pupils?

There was a very important question, was the Job Corps actually offering a program that would achieve the desired goal: a decent job and a decent way of life. Was the taxpayer really helping his deprived, poverty-stricken fellow citizens?

To investigate these impressions, respond to the above questions and others and study a representative randomly selected 'non-psychiatric' sample of Job Corps girls in depth, a research project was organized. This effort was further motivated by the fact that research was not a part of the regular center program; here was an opportunity to carefully study and learn what the problems and needs of this tremendous effort were. Fifty young women were selected at random from a representative group of girls (all had been at the Job Corps Center at least five months). Six graduated before the study was completed leaving a final total sample of forty-four (thirty-eight Negro, six Caucasian). Each girl received psychiatric interviews and evaluation, social casework study, psychological projective tests, and evaluation of their academic and vocational performance.* Let us summarize the results of this study. Investigation of psychi-

atric status revealed that five girls experienced intermittent depression (none with suicidal acting out), two with an intermittent history or chronic anxiety diminished in intensity and frequency during their experience at the Job Corps Center, sixteen with an array of individual psychiatric phenomena, none constituting a full clinical syndrome or disease (e.g. dissociative states, psychosomatic problems, insomnia), twenty girls without any significant emotional disturbance by history or direct interview and one with a schizoid personality, who, nevertheless, happened to be one of the most successful students on center. (An analysis of one-hundred psychiatric consultations, unrelated to this research project, revealed three acute psychotic reactions with the largest number of patients constituting behavioral problems unrelated to psychiatric disease. Recognizing the nature of these teenagers' early life's experience, one is astounded by the low incidence of psychiatric difficulty and perhaps more so at the continued ability to function when present. The largest problem presented to the center was that of behavior, usually of an aggressive nature).

Psychological testing and psychiatric interview indicated that feelings of worthlessness and inferiority were not characteristic of the Negro girls in the study, but when found in this ethnic group, were related to a depressive problem. These feelings were found in a disproportionate number of white girls. These findings indicate that young Negro women possess an individual and group pride which could be helpfully utilized in their training and academic program. Before poor white youth can be expected to function successfully, this problem of self-image must be corrected and self-confidence established. The Negro girls included in this research study revealed a consistent finding of immaturity in practical plans for the future. The planning of long-range goals and the associated problem solving required had not been an experience of their lives, nor had they seen this in their families. An analysis of the family experience of these forty-four subjects clearly indicated a pattern of lacking models for motivation, of having personal relationships with family members that would allow the consideration of distant future goals, the opportunity of thinking about one's future in an optimistic and constructive fashion. A large majority had been surrounded by family members who worked in menial and degrading positions, who could never plan beyond the next paycheck, whose tremendous preoccupation with just the daily struggle to survive disallowed any consideration of education, and who were often overwhelmed by experiences of failure, frustration and despair.

An analysis of the past and current educational experiences of the corps women indicated a consistent positive response to vocational training with the associated idea of having a job skill. Feelings relating to basic academic teaching, both in their pre-Job Corps experience and on the center, were consistently negative. The only positive association to the academic classroom was in relation to an enjoyable personal experience with a teacher, not to the material being learned or the educational process itself or any promise it had of being an "educated person." Apparently the earlier experiences of repeated failure and shame in the classroom was preventing any significant impact from taking place during Job Corps experience.

On the other hand, the tremendous positive feeling attached to the vocational training area did reveal an existing motivational base to which the acquisition of basic learning skills could be attached.

Forty-one of the forty-four girls studied expressed feelings of discomfort and isolation at being located in the "country." The other girls were indifferent to their surroundings. Six girls frankly stated that they might have had difficulty sticking to any kind of program if they had not been wrenched from their families and placed in an isolated geographical location.

One of the most revealing sessions of the research study dealt with the corps women's discussion of their hopes for the future and their families. All of the girls wished to have reasonably sized families when they married, this usually meaning three or four children. They did not wish to offer to their children the same experiences of overcrowding, inadequate clothing, lack of parental attention and all those problems associated with a poverty-stricken large family. However, they had not elaborated this basic wish to limit the size of their families into any concrete concept of family planning nor had they, strangely enough, obtained any information concerning the appropriate use of contraceptive materials or medications. In addition to a desire to limit the size of their families a large percentage of these young women look forward to offering their children the opportunity for greater education than they had had. Again, this was an idea and had not been elaborated into some practical plan of achievement.

Similarly to the lack of practical, everyday, plans which would turn their ideas and wishes into action, there was a naive attitude of conviction of "making it" in the future associated with the belief that success followed the acquisition of a job skill. Comment: The experience of these young ladies' lives has lacked the learning and use of problem-solving techniques to which job skills and academic learning could be attached. These kinds of experiences must be provided in the Job Corps and other opportunity programs. Adults must be present in the Job Corps environment that offer the opportunity for having models not previously experienced who can discuss the future in a practical and common-sensible way, and who through their own per-

*The detailed research study was presented to the 1968 Annual Meeting of the American Psychiatric Association in Boston and will be published in full elsewhere.

sonal experiences (i.e., that of staff members) have been able to successfully cope with the problems of life and not become overwhelmed by immediate needs and despair.

Education must be offered in a setting which is consistent with the needs of those to be taught and in this particular situation it is clear that the classical classroom retains the aura of failure and lack of motivation associated with earlier educational experiences. Academic skills must be imparted in the vocational area in which high motivation exists.

It is reasonable to assume that the high drop-out rate is in part related to the encountering of familiar experiences of failure and the lack of experiences which enlist rapid motivation and the development of hope.

It is most important to recognize that this program has been one of a pioneer nature, an effort that has never been attempted before, and that it is a learning experience for those who are attempting to introduce the concepts of equality and opportunity. It would be unreasonable to believe that the right program could be found in a short period of time or that every graduate of a Job Corps Center would be gainfully employed and find equal opportunity. It is very important to recognize the need to continually modify the existing program as we increase our knowledge of the needs of those individuals we are attempting to reach.

It is my personal conclusion after spending many hours in close personal discussion with many young women enrolled at the Job Corps Center in Poland Spring, that a great many are being helped, are obtaining necessary and valuable job skills, are having some of those personal experiences that are so necessary to their future survival and have shown the potential of the program. It is clear that not enough of the young women at the Job Corps Center are having these experiences and that the program must be reorganized to provide them. This would involve a larger staff with an emphasis upon counseling, personal contact, and the provision of experiences that would allow for problem solving and the learning of techniques that would be practically useful in their future lives. A reassessment of the relative importance of the academic educational effort must also be undertaken with the incorporation of this aspect of the program into the vocational area. The Government must ask themselves whether they wish to process a large number of individuals through an inadequate program or do the job more effectively for fewer.

14 Deering Street, Portland, Maine 04101

WIDE-INTEREST SCIENTIFIC SESSIONS PLANNED FOR AMA CLINICAL CONVENTION

Scientific sessions of wide medical interest are planned for morning and afternoon Monday through Wednesday (Dec. 2-4, 1968) at the American Medical Association's 22nd Clinical Convention in Miami Beach, Fla.

Morning topics Dec. 2 include the anemias, thrombophlebitis, and obstetrics. The afternoon program includes discussion of white cell disorders and diseases of the lymph nodes, management of claudication, cerebral ischemia due to neck vessel occlusion, and gynecology.

Tuesday, Dec. 3, topics are cardiology, gastrointestinal diseases, proctology, and—in the afternoon—new approaches in cardiology, bacterial skin infections, and the skin and sunlight.

Discussions on sex will be held Wednesday morning, Dec. 4, to include such topics as marital problems, changing sex values, pre-adolescent and adolescent sex education, and sex and the senior citizen. Hypertension and the kidney also will be studied at the morning session.

Wednesday afternoon's topics include pulmonary diseases, respiratory ills in children, and more on the kidney.

Scientific sessions will be held in Miami Beach Convention Hall. Total registration is expected to be about 10,000, including 4,500 physicians; 300 medical students, nurses, and members of allied medical professions; 800 industrial exhibitors; and 4,400 guests of physicians and exhibitors.

The Oct. 21 issue of The Journal of the American Medical Association will carry the Scientific Program for the Clinical Convention.

Systemic Allergic Reaction Due To Phenylbutazone

ERWIN G. RERRICK, M.D.*

Butazolidin® Alka (brand of phenylbutazone, Geigy) belongs to the class of pyrazole compounds and this drug is mainly used in the treatment of diseases affecting the joints. The beneficial effects are based on the analgesic, anti-inflammatory, antipyretic and antihistaminic properties. It was first synthetized in 1946 by Stenzl and according to Rechenberg[1] by 1960, about 50 million cases were treated with this drug. Toxic and allergic reactions are sporadically reported and the indications and contraindications are well established. Phenylbutazone disappears slowly from the body and one of its metabolite, p-aminophenol becomes bound to protein and acquires strong sensitizing ability.[2,3]

This paper describes changes in the myocardium, kidneys and vessels of various organs after about 40 grams of phenylbutazone ingestion within 7 to 8 months.

CASE REPORT

This 41-year-old previously always healthy, white man saw a physician because of pain in the left shoulder and flanks of several day's duration. Urine analysis, except 10-12 RBC in the sediment, revealed nothing of note. About 4 weeks later (end of May) the serum uric acid was found to be 5.1mg% and he was told that he had gout. For the treatment 20 tablets of phenylbutazone were prescribed. During the month of June, four additional prescriptions for phenylbutazone were given to the patient, in the amount of 120 tablets. During this time, the pain in the shoulder and back subsided and recurred and he had taken the medication accordingly. At the end of July and early August he began to complain about polyuria, morning stiffness in the joints and loss of appetite. During this time, and in September he had taken 60 tablets and in October and November 80 more tablets of phenylbutazone were released to the patient because he still had pain in his joints. By the end of November he started to lose his hearing for which he received some kind of local treatment to his ears. He also complained of having a sore throat. A throat culture failed to reveal hemolytic streptococcus. He became worse, gained weight, had to buy larger shirts and shoes; he felt awful and was "dragging." Because of the persistence of joint pain, in December he received 40 additional tablets of the same medication. He was seen again by the attending physician on January 15 and laboratory tests were ordered. Uric acid 9.2mg%; RA latex fixation test, positive; erythrocyte sedimentation rate 26mm/hr.; hemoglobin 16gms/100ml; hematocrit 47% and WBC 9,950. Differential: 68% neutrophils, 27% lymphocytes, 2% monocytes and 3% eosinophils. Platelets normal. Urine: pale straw, clear, pH5, sp.gr. 1.008, albumin traces, and the sediment contained occasional RBC and occasional WBC. He was told to continue with the pills because he had rheumatoid arthritis. In January he took 60 tablets of phenylbutazone. As the days went by the patient became weaker; he was nauseated, unable to work, and, therefore, hospitalized February 1. Prior to the hospitalization, he developed rashes on the chin and neck and a small ulcer on the tongue.

First hospital admission, February 1: physical examination revealed tender swollen wrists, shoulders, knees and cold wet hands and feet. Pulse 92 regular and 2° systolic murmur. Enlarged spleen. Ulcer on the tongue and crusted sores on the chin. Blood pressure 160/88 Hgmm. and after a few days 124/80 Hgmm. and remained stabilized during the hospitalization. Serum latex fixation for rheumatoid factor weakly positive and a titer 1:320. Anti-nuclear factor negative. Joint fluid latex fixation test positive 1:320. Urine: pH 8.5, sp.gr. 1.009, 50mg. albumin and the sediment was loaded with RBC and occasional red cell clumps. Corrected erythrocyte sedimentation rate 35mm./hr.; hematocrit 40%; WBC 10,400. Differential count: 77% segmented cells, 3% eosinophils, 17% lymphocytes, 3% monocytes and slightly anisocytotic red cells. Uric acid 5.8mg%; salicylate level O. Synovial fluid from the right knee: yellow, cloudy, poor mucin clot, low viscosity, cell count 4,525 with 89% neutrophils and few calcium oxalate crystals. ASO titer less than 12 Todd units, L.E. cells negative. Serological test for syphilis negative. Urine culture no growth. During this hospitalization, repeated urine examinations were performed, which all revealed innumerable red blood cells, rare red cell casts, hyaline and waxy casts in the sediment and the albumin increased to 125mgs. Sputum cultures four days after admission were negative for acid fast organisms. The white cell count remained essentially normal and in the differential count the eosinophils increased to 4%. Seven days after the admission alpha streptococcus was isolated from a single throat culture. BUN on the 8th day of hospitalization 28mg%, and creatinine 1.5mg%. On admission Butazolidin was discontinued and was substituted with aspirin and Darvon.® Seven days after admission the patient had no pain in the joints; there was full range of motion and all signs of arthritis had disappeared. ECG: sinustachycardia. Radiological examination of hands and feet shortly after admission showed minimal soft tissue swelling, but no specific abnormality of the bones and only minimal degenerative changes of the distal interphalangeal joints and the GI tract showed irritable duodenal bulb and no evidence of ulceration. IVP was normal with only minimal changes on the left, consistent with infection, no stones.

Eleven days after admission he was discharged home with a diagnosis of rheumatoid arthritis, glomerulonephritis with hematuria, and advised to have bed rest for an indefinite period, at least 3 to 6 months with no work, aspirin or bufferin to tolerance 10 to 18 a day, with Maalox® or milk, Plaquenil® 200mg/day and Valium® 5mg. if needed, after lunch or for sleep were ordered. Urine and sedimentation rate should be checked at least monthly to determine when he should return to work.

Ten days later the patient was re-admitted because of fecal impaction. On admission there was no evidence of joint disease. The mobility of all joints was painless and complete. Laboratory tests: cloudy urine, sp.gr. 1.015, pH 8, 125mg% albumin, and sediment loaded with RBC's, rare coarsely granular and occasional waxy casts; BUN 33 mg% and the corrected sedimentation rate 30mm/hr. (hematocrit 32). The fecal impaction was corrected and he was discharged the next day.

At home he was unable to take the prescribed medications; he complained of increasing weakness, nausea, loss of appetite, and showed a downhill course.

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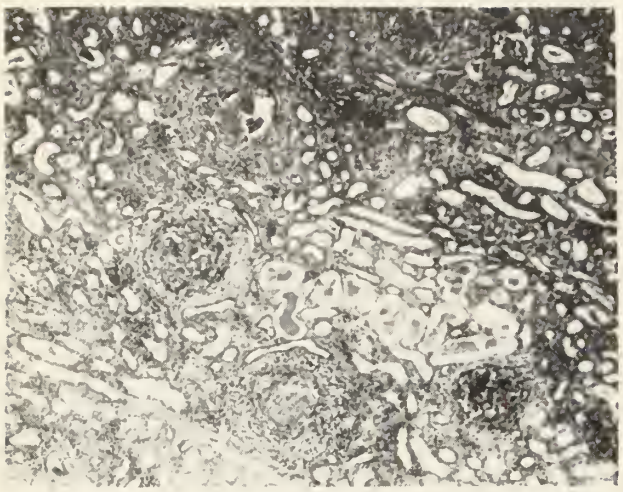


Fig. 1

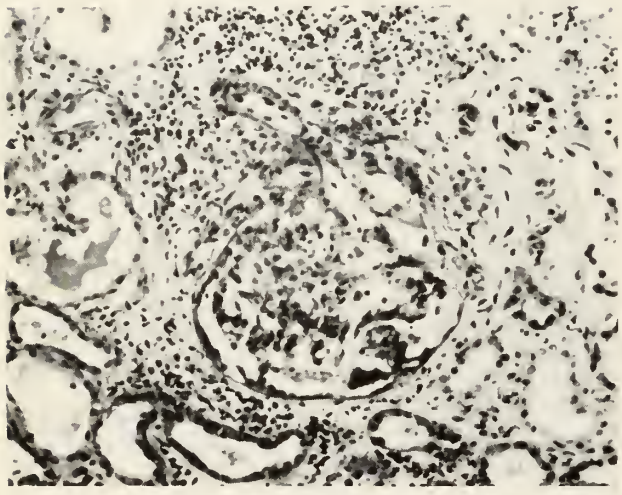


Fig. 2

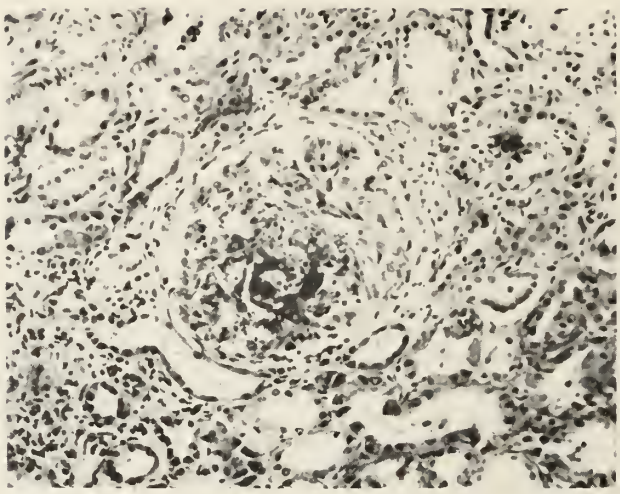


Fig. 3

On March 3 he was hospitalized for the third time.

On admission the physical examination revealed a chronically ill, pale, white man. Pulse 96 regular, normal respiration, blood pressure 120/80 Hgmm. On the left margin of the tongue there was a healing ulceration. No lymphodenopathy and no significant heart murmur. Chest clear. Questionable tenderness over the right costo-vertebral region. No deformity of any joints. Throughout this last hospitalization the urine sediment revealed the presence of innumerable RBC's, red cell and granular casts and 1-2 plus albumin. The specific gravity ranged from 1.003 – 1.015. Uric acid 5mg% and the BUN gradually increased to 133mg%, creatinine to 12.1mg%. The ASO titer was 50 Todd units and the sedimentation rate 100mm/hr. There were no L.E. cells found. Serum phosphorus and potassium were elevated and the calcium was low. Congo red, liver function tests and other blood chemistries were within normal limits. Muscle biopsy for periarteritis nodosa was negative. Chest x-ray and ECG were not contributory. A bone marrow examination revealed increased eosinophilic cells. From March 3 to 28 he received the following medications: Maalox, Vi-Sorbin,® aspirin, Compazine.® On March 7, Aristocort® 8mg. 3x/day for 1 week were prescribed. This dose was reduced to 2x/day on March 14, to once a day on March 16 and withdrawn on March 28. Two days later the patient complained of headache and his blood pressure rose to 180/100 Hgmm., pulse 96. On April 1, the patient became suddenly semi-comatose, the blood pressure was 200/100 Hgmm., the pupils did not respond to light and were dilated. Spinal tap was bloody. There was evidence of stiffness of the neck and bilateral positive Babinski reflexes. The course following the cerebral hemorrhage was stormy and he appeared to be stabilized for awhile. The patient died April 24.

Post mortem examination – The gross and microscopic descriptions are restricted to the pertinent findings.

The external examination reveals little of note. The lips and oral mucosa are markedly pale; the face was slightly rounded. The extremities are not deformed and there was no discoloration of the skin and no subcutaneous nodules. The subcutaneous tissues are moderately water-logged. The abdominal and thoracic cavities are not remarkable, no adhesions or free fluid. The distended pericardial sac contained about 200ml. of clear, straw colored fluid. No adhesions. No evidence of pulmonary embolism. The epicardium is smooth, glistening and the walls of the coronary arteries are thin. There was slight hypertrophy of the wall of the left ventricle, measuring 2cm. in thickness and the wall of the right ventricle not remarkable. The multiple cut surfaces of the myocardium revealed no zones of hemorrhages or scars. The endocardium, valves, chordae tendineae were thin and smooth and no mural thrombi were found in the auricular appendages. The lungs were heavy, dark slate-gray in color mottled with irregular dark-red firm zones in all lobes, but mostly in the lower lobes. No evidence of peripheral pulmonary embolism. Patent bronchioles. Small punctiform hemorrhages were noted in the mucosa of the duodenum and upper jejunum. Adrenal glands were not unusual. Both kidneys were enlarged; the capsules were thin and stripped easily. The surfaces were pale and the stellate veins prominent. Scattered, dark red zones representing punctiform hemorrhages were noted. On the cut surfaces the cortices were pale; the glomeruli were visible and the pyramids congested and prominent with their dark red color. Few petechial hemorrhages were seen in the upper calyceal system of the right kidney. The brain was edematous with noticeable flattening of the gyri and some decrease of the sulci. Over the convexity of the right frontal lobe the subarachnoid space in an area of about 3cm. in diameter was filled with blood. In general the walls of the cerebral vessels were thin without anomalies. The thin meninges were faintly yellow over the pons. On sectioning dilatation of the right ventricle and of the anterior horn was noted. Almost the entire anterior horn was filled with a large mass of dark red slightly laminated blood clot, measuring about 6cm. in diameter and was adherent to the roof. Additional cut surfaces revealed well preserved gray and white matter and no zones of hemorrhages

Continued on Page 183



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Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

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See also: Liotta, D.: Pour le diagnostic des tumeurs du pancréas: La duodénographie hypotonique, Lyon chir. 50:445-460 (May-June) 1955.

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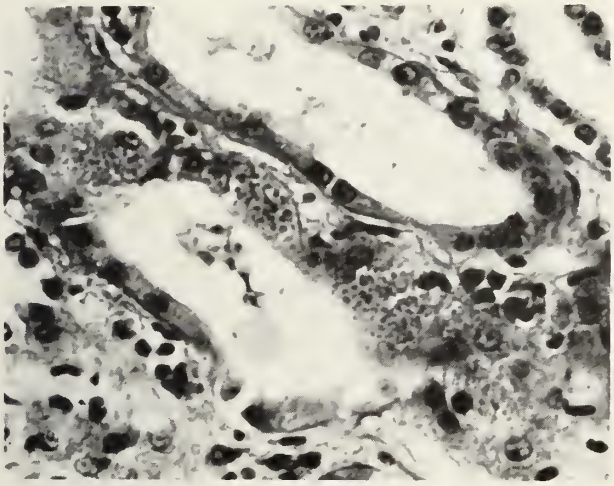


Fig. 4

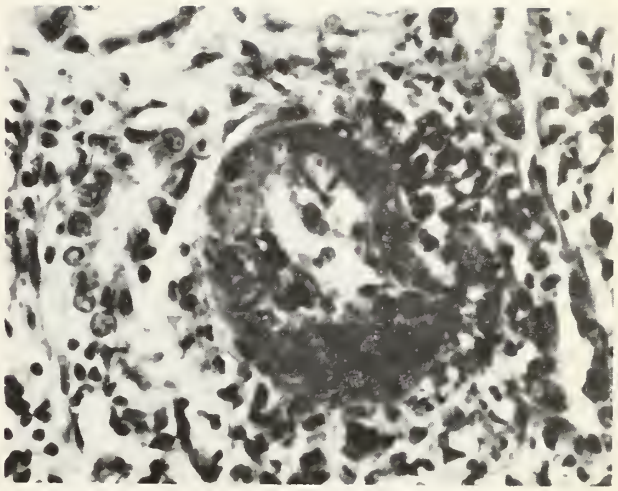


Fig. 5

or softening. The rest of the organs including the cut surfaces of the lumbar vertebrae were not remarkable.

Histological examination – The changes in the kidneys are extensive, diffuse and have involved the nephrons, interstitium and focally the walls of the arterioles. In the outer cortex (Fig. 1) the glomeruli are surrounded in a ring-like fashion by lymphocytes and few plasma cells. The Bowman capsules are thickened; the endothelium is proliferated or proliferating and many crescents are formed. The endothelium of the tuft capillaries is proliferated, the basal membrane is thickened, hyalinized (Fig. 2) and in many situations there is complete fusion of the capsules with the tuft capillaries. Scattered there is fibrinoid necrosis (Fig. 3) of the walls of the tuft capillaries which are infiltrated by few neutrophilic leukocytes, nuclear fragments and by occasional eosinophilic leukocytes. In many situations there is blood in the still open glomerular spaces. The histological changes appear to be quite uniform as to the time of duration and only few partially hylinized glomeruli are found. Many of the tubules contain albuminous casts, occasionally red blood cells and there is fatty or hyaline degeneration (Fig. 4) of the tubular epithelium. The interstitium is increased and is infiltrated by many lymphocytes, plasma cells and scattered by eosinophilic leukocytes. Few small what appear to be granulomata are also found. The tubules appear to be compressed. Occasionally the arterioles (Fig. 5) and some of the afferent vessels exhibit hyaline necrosis and in one of the sections a rather large vessel is partially thrombosed and the wall shows almost diffuse and complete fibrinoid necrosis with focal hemorrhages in the surrounding connective tissue. Vascular inflammation and necrosis is seen in the peripelvic adipose tissue (Fig. 6) with marked cellular reaction, containing eosinophilic leukocytes. In the mucosa of one of the calyces a necrotic area is present, with homogenous center. It is surrounded by lymphocytes, plasma cells, few neutrophilic and scattered by eosinophilic leukocytes. The larger branches of the renal arteries are well preserved. In the wall of the bladder, in one of the sections, a small vessel reveals acute fibrinoid necrosis, surrounded by eosinophils.

The interstitium of the *myocardium* is everywhere edematous and in many situations infiltrated by numerous round cells (Fig. 7) mixed with eosinophilic leukocytes. In some situations there is suggestion of possible necrosis of muscle fibers (Fig. 8). Similar cellular infiltrate is noted here and there beneath the endocardium. Round cell infiltrate with eosinophilic leukocytes is also seen in the epicardial adipose tissue, chiefly in perivascular position. The vessel walls, large or small, are well preserved and show no evidence of necrosis.

In the sections from the *brain* a rather large vessel at the

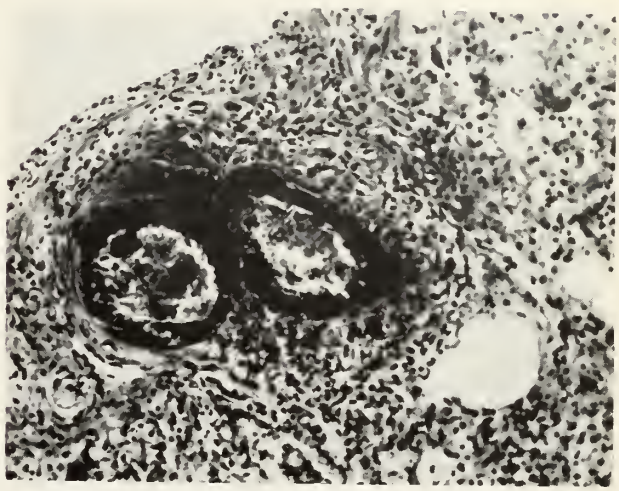


Fig. 6

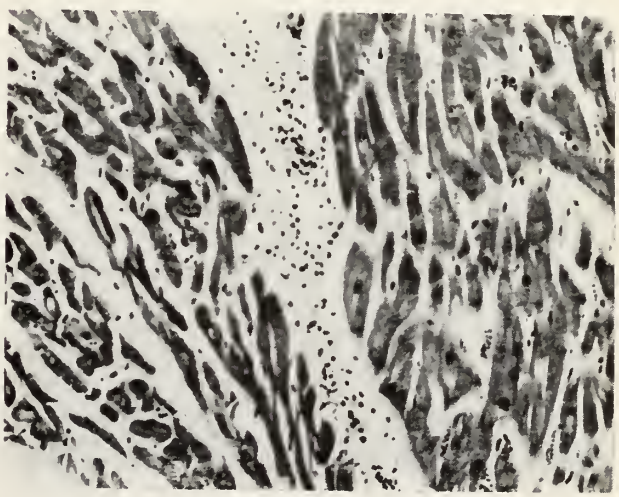


Fig. 7

bottom of a sulcus around the site of hemorrhage reveals extensive fibrinoid necrosis, with evidence of rupture and hemorrhage into the adjacent space. The lumen of the vessel is partly occluded by thrombus. The cortex and white matter adjacent to the hemorrhage are necrotic with complete loss of the cortical

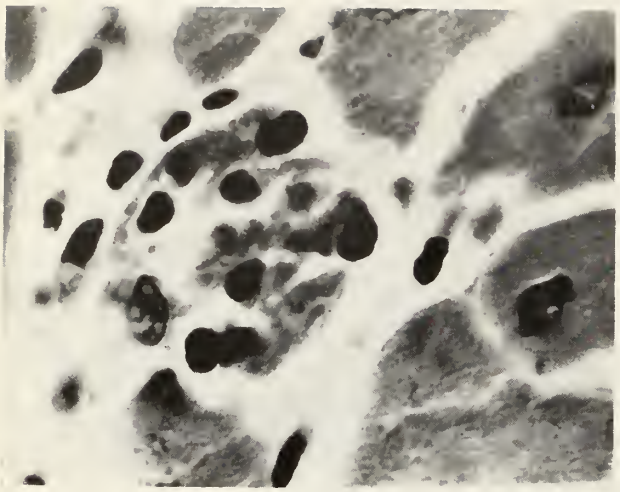


Fig. 8

lamination and the area is infiltrated by innumerable neutrophilic leukocytes and occasionally microglial cells with foamy cytoplasm are seen.

Summary of pathological findings – Diffuse acute glomerulitis, interstitial nephritis and vasculitis. Interstitial myocarditis and vasculitis of a small meningeal artery with hemorrhage. The changes indicate allergic etiology.

Discussion

The possibility of rheumatoid arthritis complicated with vasculitis may be considered. Positive latex fixation tests were found at the height of the disease, however, disappearance of joint complaints were noted within a few days following the withdrawal of the drug. Rosenberg[4] and Kahn[5] in large samples have noted 20% false positive reactions in patients who had musculoskeletal symptoms and disorders, unrelated to rheumatoid arthritis, Winkelmann et al[6] in their studies of cutaneous angiitis observed 7 out of 15 cases with positive rheumatoid factor. None of the patients had rheumatoid arthritis. Schmid et al[7] reporting 34 personally observed cases and reviewing 81 cases reported from the literature between 1934 and 1959 noted that arteritis did not become apparent until an average of 9 years of rheumatoid joint disease had elapsed. Johnson et al[8] note that the duration of arthritis ranged from one to eight years prior to the symptoms of arteritis. Periarteritis nodosa with glomerulitis as described by Davson et al[9] may be a possibility. The vascular lesions, however, are few, acute, and show no tendency to heal and appear to be of the same age. If this case does represent periarteritis nodosa, then it was modified by phenylbutazone.

Review of the literature related to phenylbutazone toxicity will be limited to reports which are pertinent to this case.

Mauer[10] in reporting the 23rd death following phenylbutazone treatment summarizes the toxic reactions previously observed in 1,199 cases. Skin rashes occurred in 191 cases and usually proceeded bone marrow changes. Gastrointestinal symptoms (nausea, vomiting, pain, etc.) in 450 cases was the most frequent complaint, second to edema. Nathan et al[11] found interstitial myocarditis, acute vasculitis of the heart, lungs, gastrointestinal tract and periadrenal adipose tissue in an arthritic patient who developed fatal exfoliative dermatitis following therapeutical regimen of phenylbutazone of about 19 days duration. Interstitial myocarditis and unusual but not described liver and kidney changes, were noted in one fatal case, reported by Engleman et al.[12] The duration of phenylbutazone treatment is not mentioned in their clinical-pathologic study. Capillary thrombi in the glomeruli, convoluted tubular necrosis and occasional interluminal cast formation probably attributable to phenylbutazone sensitization is reported in a kidney biopsy by Lipsett et al.[13] The patient had no history of cardiovascular or renal disease and no symptoms referrable to the urinary tract. This patient had taken 6, 200mg. tablets of phenylbutazone 3 weeks prior to the hospitalization, but discontinued it voluntarily because of gastric irritation. Six days before the entry to the hospital he ingested another 200mg. tablet.

MacCarthy et al[14] believe that the interstitial myocarditis was probably due to hypersensitivity to phenylbutazone and the hepatic and adrenal necrosis were ascribed as toxic reactions in an elderly patient with mild rheumatic pain of many year's duration. The postmortem histological findings of the kidneys, reported by Toussaint et al,[15] exhibited acute vascular necrosis with thrombi, interstitial hemorrhages and hyalinized glomeruli in all stages, suggesting pre-existing kidney disease. The acute renal failure became manifest 2 days after 2 i.m. administrations of Irgapyrin (1.5gm dipyrin plus 1.5gm. phenylbutazone). Miatello et al[16] found changes of membranous glomerulitis 8 months later after the onset of nephrotic syndrome. Herrmann et al[3] have reported 2 cases with autopsy findings. The kidneys revealed extensive, diffuse glomerulonephritis with interstitial nephritis and the presence of eosinophilic cells were regarded as possibly allergic manifestation. One patient was known to be sensitive to pyrazolon type drugs. Both patients received Irgapyrin over about 2 years because of polyarthritis. In the second case the complement fixation for Irgapyrin was positive in a titer of 1:1024, 8 weeks after the drug was withdrawn. McCombs[17] reviewing 72 cases of vasculitis found 2 cases where phenylbutazone was the offending drug. Autopsies in 17 out of 25 fatal cases showed active focal or diffuse glomerulonephritis with evidence of vasculitis in various organs other than the kidney. Similar changes were also seen in 5 of 7 patients autopsied who were treated with corticosteroid drugs. McCombs[17] also notes that when the disease was progressive, severe gross hematuria and signs of renal failure became manifest.

In this case report the described histological changes in the kidneys, heart and in the vessels of the kidneys, brain, and bladder are compatible with allergic type of reaction. The diffuse glomerulitis with little healing

tendency and the unusual periglomerular accumulation of inflammatory cells may be due to high concentration of the drug around the nephrons. Harwerth et al[18] found the highest concentration of C 14 labeled phenylbutazone in the kidney and liver of rats fed with this drug. In addition, glomerulitis seems to be one of the manifestations of allergic vasculitis as noted earlier by McCombs[17] and also stated by McCombs, Patterson and MacMahon.[19]

The reports of the literature related to presenting signs, symptoms and histological changes are in many aspects similar to this case. Since phenylbutazone was the drug ingested-in an on and off pattern – over a period of several months, the causal relationship is highly probable.

Summary

Causal relationship between Butazolidin Alka ingestion and fatal allergic visceral involvement are presented. Pertinent observations from the literature are reviewed.

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NEW ENGLAND INTERNISTS SCHEDULE SCIENTIFIC MEETING

The American College of Physicians (ACP) will sponsor a regional scientific meeting for specialists in internal medicine in the New England states and eastern Canada, Oct. 4-5, 1968 in Hanover, N.H.

The meeting, to be held at the Kellogg Auditorium, Dartmouth Medical College, will be attended by physicians from Rhode Island, Connecticut, Maine, Massachusetts, New Hampshire, Vermont and the Quebec and Atlantic Provinces of Canada. It is one of 34 scientific-educational meetings sponsored by the ACP during the academic year. Held throughout the United States and Canada, the meetings help the College's 14,300 members keep abreast of developments in the basic medical sciences and in clinical medicine.

Among special guests will be H. Marvin Pollard, M.D., Ann Arbor, Mich., ACP President. Dr. Pollard is Professor of Internal Medicine at the University of Michigan Medical School and head of the Section of Gastroenterology at the University of Michigan Medical Center.

In general charge of the meeting is J. Dunbar Shields, Jr., M.D., Concord, N.H., ACP Governor for New Hampshire.

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Department of Health and Welfare

Diabetes Detection Program

JOHN JACOBSON, M.D. and THOMAS SMITH*

One of the major public health problems in the United States is the estimated million and a half diabetics who are not aware of their condition. To uncover these "hidden" diabetics and bring them to treatment as early in the disease as possible is the goal of both community-wide detection programs and of diagnostic investigations by individual physicians in their own practices.

While detection and diagnosis may occasionally overlap, they are basically designed to complement one another. Mass screening, using inexpensive techniques that are relatively easy to administer, is intended to do no more than reveal diabetic suspects. These relatively rough determinations are then followed up in the doctor's office or clinic by more sensitive testing for glucose tolerance to establish a firm diagnosis.

The Diabetics Detection Program of the Department of Health and Welfare has been in operation since 1959. The program was developed by the Division of Tuberculosis Control and the Diabetes Detection Advisory Committee of the Maine Medical Association. Arthur Krosnik, M.D., U.S. Public Health Service, Diabetes Program, New Jersey, was consultant to the Committee.

Methods: The Diabetes Detection Program is limited to subjects 30 years and older or those with a history of diabetes in the family. Capillary blood from a finger puncture is collected in a Unopette (collecting tube with 1% sodium fluoride preservative) and processed for true glucose on a Technicon Autoanalyzer. The autoanalyzer is periodically checked with standards from the Communicable Disease Center Laboratory Services.

The subject is instructed to fast for 4 hours before the first blood specimen. After the fasting specimens are obtained a lemon-flavored drink containing 100 grams of available glucose is given and a second specimen is drawn two hours later. If the two hour specimen was greater than 150 mgs.% a report is sent to the subject's physician and a letter is sent to the subject. Occasionally a subject does not retain the glucose drink. In that case, fasting samples greater than 110 mgs.% are referred.

Some screening programs, particularly industries, find it feasible to do random blood studies rather than fasting and 2 hour postprandial studies. Those subjects with glucose levels greater than 130 mgs.% are rescheduled for additional screening with glucose loading at a later date.

The fact that this test is only a screening procedure and that a physician's evaluation is required to confirm or rule out diabetes is emphasized at the time of screening and in all correspondence to the subjects.

Results: Since 1959, 82,128 subjects have been screened and 960 previously undiagnosed cases of diabetes have been discovered. Since 1966 most of the screening programs have used fasting and 2 hour postprandial specimens. The number of subjects with positive screening tests has tripled since 1966, while the number of new cases has risen from 0.75% to 2.68%.

The yield of new cases from subjects 45 years or older is three times greater than from those less than 45 years. The yield increases proportionately if the subject is over 45 years old and is either obese or has a family history of diabetes or both.

Comments: Diabetes screening is conducted with the approval of the county medical societies. Programs are scheduled at the request of the local health councils. Field personnel from the Diabetes Detection Program work closely with the health organizations in the plan-

*Division of Tuberculosis Control, Department of Health and Welfare.

YEARS	NUMBER SCREENED	NUMBER POSITIVE AND REFERRED	PREVIOUSLY UNDIAGNOSED DIABETES	NUMBER REFERRED WITH NO DIAGNOSIS
1959-1965	64,127	1,983 (3.1%)	477 (0.75%)	196 (9.9%)
1966-1967	18,001	2,100 (11.7%)	483 (2.68%)	138 (6.6%)

ning of programs, arranging for volunteers, and the distribution of publicity. Two technicians for the Program provide the necessary laboratory supplies and do the blood-letting.

Following completion of the screening programs and physician evaluation, a series of educational programs for the new diagnosed diabetics and any other diabetics is conducted. These are staffed by personnel from the Nutrition Services Division and local physicians and discuss problems of diet and health as related to diabetes.

The screening programs have been conducted in 12 counties. Arrangements are being made to schedule programs in Franklin, Oxford, Cumberland and York counties.

News and Notes

Emergency Medical Care Conference

A top-level conference on emergency medical care program was held on August 14, 1968 at the Sheraton-Eastland Motor Hotel in Portland, Maine. Presidents and executive secretaries of the six-state medical societies of New England and the chairmen of their rural health committees were called together with representatives from state health departments, U.S. Public Health Service, university extension services, Red Cross, and planning commissions from the various states to discuss what could be done to improve the care of people injured in highway and other accidents in New England.

The meeting was conducted by Dr. G. S. Gudernatch of Sharon, Connecticut, a member of the American Medical Association's Rural Health Council, and was under the sponsorship of the Council of New England State Medical Societies, a 6-state organization representing the more than 18,000 doctors in New England. The discussions revolved about improving communications, first aid training, ambulance transportation of the injured, and definitive care. One suggested plan was to hold a teaching conference on the subject of emergency medical care in Maine some time in the future, possibly next Spring. State Medical Societies not already having done so were urged to pass resolutions endorsing and implementing the AMA's five-point Rural Emergency Medical Services Plan.

Among key members attending from Maine were Dr. Asa Adams, President of the Maine Medical Association, and Doctors W. H. Duffy and Eliot Stadler, of the Association's Rural Health Committee. Other Maine participants at the meeting included Dr. Louis Ploch, a rural Sociologist from the University of Maine and Mr. Richard Gerry of the Federal Public Health Service in Augusta. Representatives were also present from Vermont, Massachusetts, Rhode Island and Connecticut.

Five-Day Course On Rheumatic Diseases Set For Internists

The American College of Physicians (ACP) will sponsor a five-day postgraduate course on "Rheumatic Disease: Pathology, Immunology, Diagnosis and Treatment," Oct. 28-Nov. 1, 1968 at the Robert B. Brigham Hospital, Boston, Massachusetts.

The course, held in cooperation with the Harvard Medical School, is under the direction of Theodore B. Bayles, M.D., Boston, Mass., Assistant Clinical Professor of Medicine at the medical school. Co-directors, also from Harvard Medical School, will be John R. David, M.D., Assistant Professor of Medicine; Arthur P. Hall, M.D., Clinical Associate in Medicine and J. Peter Kulka, M.D., Associate Clinical Professor of Pathology.

For registration and applications write to: Edward C. Rosenow, Jr., M.D., Executive Director, The American College of Physicians, 4200 Pine Street, Philadelphia, Pennsylvania 19104.



Maine Heart Association Notes

20 Winter Street, Augusta, Maine

The Systolic Murmur — Innocent or Guilty?

The interpretation of the systolic murmur continues to be one of the most perplexing problems in the diagnosis of the presence or absence of heart disease. . . .

The systolic murmur occurs in everyone, well or sick, at one time or another. The long-distance track athlete or the thyrotoxic, feverish, pregnant or anemic patient may exhibit systolic murmurs over the apex or base of the heart because of increased velocity of blood flow over normal valves. . . . In the majority of children or adolescents, innocent systolic murmurs may be heard or recorded.

All systolic murmurs must be regarded with suspicion, however, for they may arise from rheumatoic injury to the mitral and aortic valves. Other infections or fibrotic congenital or sclerotic changes . . . may be responsible. These lesions . . . may be a nidus for the development of acute or subacute bacterial endocarditis. Or they may progress to advanced stages and lead to congestive heart failure or angina pectoris in later years.

. . . Nevertheless, . . . there is no certain method of always distinguishing between murmurs that are and those that are not innocent. In such doubtful circumstances, prophylactic therapy for prevention of endocarditis is indicated in relation to dental or other operations. . . . The greatest danger is the production of iatrogenic heart disease — that is, cardiac neurosis. . . . In most cases the erroneous diagnosis of heart disease had been based on a faulty interpretation of symptoms or signs that had been present for some time.

The absence of a history of valvular heart disease or rheumatic fever and the evidence that these systolic murmurs conform to the pulse and phonocardiographic manifestations of lesions of the aortic and mitral valves are of considerable clinical importance, . . . In some cases the murmurs may merely represent eddy flow caused by irregular calcified or fibrotic surfaces; in others, true aortic stenosis may have developed. . . . The abnormality associated with the murmurs (in the aged) indicates that prophylactic antibiotic therapy in these patients . . . is as important as in the younger age groups with rheumatoic or congenital heart disease.

Submitted by Jacob B. Dana, M.D., Maine Heart Association.

Reference: Blumgart, H. L., Editorial, New England Journal of Medicine, Vol. 279, pages 268-269, 1968.

ACHROMYCIN® WORKS HERE
TETRACYCLINE



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See inside fold for product summary.

Effectiveness: ACHROMYCIN Tetracycline is a crystalline broad-spectrum antibiotic which provides effective therapeutic activity against susceptible microorganisms.

Contraindication: History of hypersensitivity to tetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Some patients may develop a photodynamic reaction to natural or artificial sunlight. Those with a history of photosensitivity reactions should avoid direct exposure to sunlight while under treatment. Discontinue drug at first evidence of skin discomfort.

Precautions: Use may result in overgrowth of nonsusceptible organisms. Constant observation is essential. If new infections appear, take appropriate measures. Use of tetracycline during teeth development may cause discoloration of teeth.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity reaction, onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose-related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels have been reported following full therapeutic dosage. This symptom has disappeared rapidly when drug is discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. Tetracycline may form a stable calcium complex in bone-forming tissue. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: One Gm. per day, in 4 divided doses of 250 mg. each. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

ACHROMYCIN® WORKS HERE
TETRACYCLINE

Actually ACHROMYCIN works wherever the infection is due to an organism your lab cultures have shown to be tetracycline-sensitive. No other tetracycline—or analogue—can assure you of quicker or more effective antibiotic action. After all, isn't that what you want for your patient?

ACHROMYCIN was a pioneer in tetracycline therapy. Seventeen years of experience have shown that when the respiratory system, the genitourinary system, or the skin and soft tissue require treatment for infection probably caused by any of a number of sensitive strains, ACHROMYCIN is a wise choice for therapy while awaiting test results.

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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Film On "Smoking: Past And Present" Traces The History Of Smoking

NEW YORK, N. Y. — Along with "baizbol," Pavlov's dog and Beef Stroganov, to the Russians comes the dubious honor of introducing the cigarette, according to the new American Cancer Society educational film "Smoking: Past and Present."

The 15-minute film, produced in full color, traces the history of smoking through the ages and stresses the dangers of cigarette smoking in the light of today's scientific knowledge.

During the Crimean War in the mid-19th century, soldiers from England and France, the film shows, picked up the habit of cigarette smoking from their Russian adversaries. Prior to that time, tobacco smoking was limited to cigars and pipes.

Specifically designed for teen-agers, "Smoking: Past and Present" delineates just what happens when inhaled tobacco smoke enters the bronchial tubes and lung causing breakdowns in normal functioning. The film describes how continued inhalation eventually can culminate in many instances in emphysema, lung cancer and coronary heart disease. These disorders, the film notes, are often 10 times greater for smokers than for non-smokers and can be avoided, viewers are told by not smoking.

This is the first film on the history of smoking issued by the Society.

"Smoking: Past and Present" was produced by Wexler Productions, Hollywood, California, from funds supplied jointly by the Oregon Division and the National Office of the American Cancer Society.

American Cancer Society News Service Release

New England Postgraduate Assembly

November 6, 7, 8, 1968

Statler Hilton Hotel, Boston, Mass.

Wednesday Morning, November 6, 1968

Ballroom West

Presiding: ALBERT E. BARCOMB, M.D., Rochester, N.H.

9:00 **Emergency Care—The First Sixty Minutes**
Welcome and Introduction
STEPHEN GOLDFINGER, M.D., Associate in Medicine, Harvard Medical School; Assistant in Medicine, Massachusetts General Hospital

10:15 **A Comatose Patient**
Discussor: KENNETH SHINE, M.D., Chief Resident in Medicine, Massachusetts General Hospital

Wednesday Afternoon, November 6, 1968

Ballroom West

Presiding: FRANK C. WHEELOCK, JR., M.D., Boston, Mass.

2:00 **Problems in Medical Gynecology**
Treatment of Amenorrhea
Treatment of Menorrhagia
Management of Menopausal Symptoms
Newer Birth Control Medications
Discussors: ROBERT W. KISTNER, M.D., Assistant Clinical Professor of Obstetrics and Gynecology, Harvard Medical School
CHARLES EADES, M.D., Director of the Family Planning Program at the Boston Lying-In Hospital

Thursday Morning, November 7, 1968

Ballroom West

Presiding: NORMAN H. GARDNER, M.D., East Hampton, Conn.

9:00 **Management Of Common Electrolyte Disorders**
Welcome and Introduction
JEROME P. KASSIRER, M.D., Assistant Professor of Medicine, Tufts Medical School; Assistant Physician (Renal Service), New England Medical Center Hospitals

10:45 **Orthopedic Problems In Medical Practice**
Moderator: EDWIN F. CAVE, M.D., Consulting Visiting Orthopedic Surgeon, Massachusetts General Hospital

1. **Diagnosis and Treatment of Subdeltoid Bursitis and Tennis Elbow**
2. **Management of Mechanical Disability of the Feet in Children and Adults**
3. **Diagnosis and Conservative Treatment of Low Back Pain**
4. **Evaluation of the Industrial Accident Patient in So Far as Low Back Pain is Concerned**

Panelists: To be announced

Thursday Afternoon, November 7, 1968

Presiding: RICHARD E. BOUCHARD, M.D., Burlington, Vt.

3:45 **Common Psychiatric Problems And The Role Of The Physician**
Moderator: LEON EISENBERG, M.D., Professor of Psychiatry, Harvard Medical School; Chief of Psychiatry, Massachusetts General Hospital

Friday Morning, November 8, 1968

Ballroom West

Presiding: JOHN W. NORCROSS, M.D., Boston, Mass.

9:00 **Pediatric Problems Of Common Occurrence**
Moderator: CHARLES V. PRYLES, M.D., Professor of Pediatrics, State University of New York, Downstate Medical Center

10:45 **Common Problems Of Dermatology**
Moderator: BRUCE BAIRSTOW, M.D., Concord, N.H.
Panelists: To be announced

Friday Afternoon, November 8, 1968

Georgian Room

Presiding: J. DUNBAR SHIELDS, M.D., Concord, N.H.

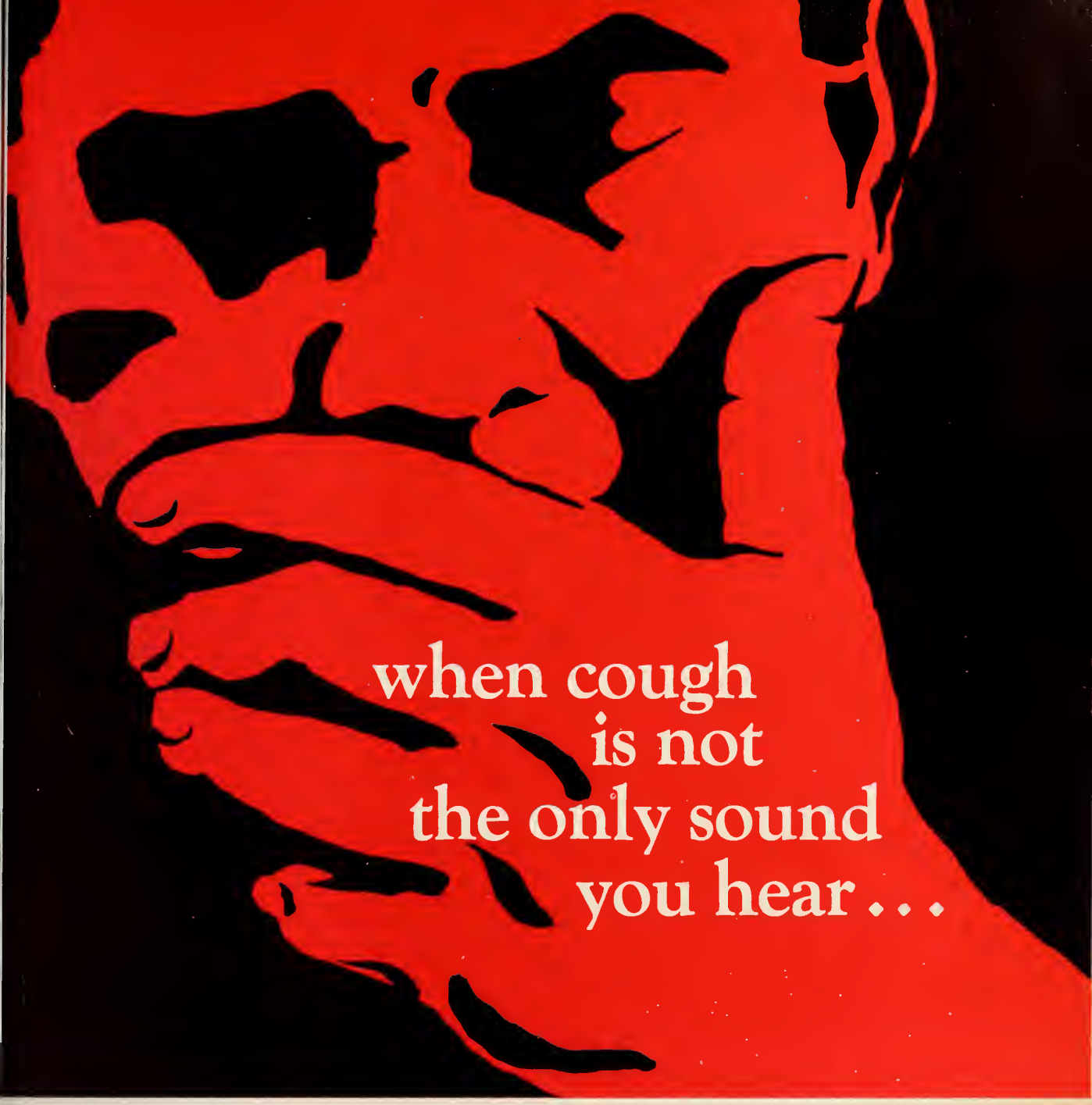
2:00 **How To Make The Clinical Laboratory Work For You**
Moderator: BRADLEY COPELAND, M.D.

3:45 **Cancer Symposium**

Moderator: W. BRADFORD PATTERSON, M.D.

REGISTRATION FEE: $20.00

Manager: Mr. Getty Page, Executive Secretary, Council of the New England State Medical Societies, 128 Merchants Row, Rutland, Vermont 05701.



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. . . **because** OMNI-TUSS is indicated for cough associated with upper respiratory tract infections, bronchitis, bronchiectasis, bronchial asthma, emphysema, sinusitis and rhinitis, hay fever, or other allergic conditions. Any of these conditions may exhibit the general symptom syndrome—coughing, wheezing, bronchospasm, and tenacious mucus—which may benefit from the antitussive, bronchodilative, antihistaminic, and expectorant action of Omni-Tuss.

The therapeutic usefulness of Omni-Tuss is enhanced by a unique resin complex formulation providing the clinically desirable advantages of: (1) uniform drug availability throughout an extended period, (2) 8 to 12 hours of symptomatic control, (3) minimal dosage requirement, (4) minimal side effects.

Economical, efficient **b.i.d.** dosage—extremely well-tolerated by children, 6-12, and adults.

'Omni Tuss' Suspension: Each teaspoonful (5 cc.) contains 10 mg. codeine (Warning: May be habit-forming), 5 mg. phenyltoloxamine, 3 mg. chlorpheniramine, 25 mg. ephedrine, all as cation exchange resin complexes of sulfonated polystyrene, and 20 mg. guaiacol carbonate.

Available on prescription only. Class X exempt narcotic. Permissible on oral prescription.

Dosage: *Adults:* 1 teaspoonful (5 cc.) q12h.
Children (6-12 *years*): ½ teaspoonful q12h.

Side Effects: Minimal, but when encountered may include jitteriness, nausea, drying of mouth, insomnia, constipation, which disappear upon adjustment of the dose or discontinuance of treatment.

Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

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a
macrolide
antibiotic for the
frequently seen
respiratory infection
in the office
and
for a problem pathogen*
in the hospital.

*Staphylococcus aureus

study I[1]

Results of a 1967 in vitro—in vivo correlation study involving 116 patients with Gram-positive coccal infections in five institutions. All patients were given TAO prior to determining the susceptibility of the offending organism.

97.0%
of the organisms were susceptible to oleandomycin*

98.0%
of the patients responded favorably to TAO® (triacetyloleandomycin)

*In some cases more than one pathogenic organism was isolated from the patient.

study II[2]

Effect of oral therapy with TAO, erythromycin, and cloxacillin on the survival time of Rhesus monkeys after intravenous inoculations of lethal doses of staphylococci, phage type 80/81.
(8 monkeys in each group)

conclusion:

*Under the conditions of this study and the doses employed, it was found that

TAO® (triacetyl-oleandomycin)
was far superior to erythromycin, as was cloxacillin, a bactericidal agent, and of particular interest, "...bacteriostatic triacetyloleandomycin was as effective or perhaps superior to cloxacillin in preventing lethal (staphylococcal, phage type 80/81) infection."

*It should be pointed out that results obtained in an experimental study of this nature may not necessarily be directly extrapolated to the clinical situation as it pertains to man.

TAO Rx Information

INDICATIONS: Include streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **CONTRAINDICATIONS AND PRECAUTIONS:** Not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including darkfield examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

References: 1. Isenberg, H. D.: Clinical Evaluation of Laboratory Guidance to Antibiotic Therapy; Health Laboratory Science (July) 1967. 2. Saslaw, S., Carlisle, H. N.: Studies on Therapy of Staphylococcal Infections in Monkeys. 1. Comparison of Cloxacillin, Triacetyloleandomycin and Erythromycin. Proc. Soc. Exp. Biol. & Med.: Vol. 125, No. 4 (Aug.-Sept.) 1967.

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In the complex picture of moderate to severe anxiety...



there is a new reason for prescribing Mellaril (Thioridazine HCl)

effectiveness in mixed anxiety-depression

Long recognized for its usefulness in the treatment of moderate to severe anxiety, Mellaril is now also known to be effective against mixed anxiety-depression.

Often the symptoms of anxiety states are difficult to sort out—even with the most careful probing. The patient may manifest symptoms of agitation, restlessness, insomnia, somatic complaints. But what of the depression that may be mixed in the total picture? It is reassuring to know that Mellaril may be prescribed—with strong possibilities of success—when there is anxiety alone or a mixture of anxiety and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

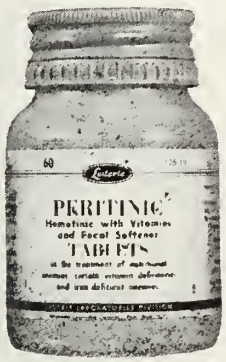
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for moderate to severe anxiety and mixed anxiety-depression

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A tablet-a-day provides:

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Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. (Now isn't that a good idea in an iron-containing hematinic? We'll send you samples if you'll send a request on your Rx blank, addressed to Department 150.)

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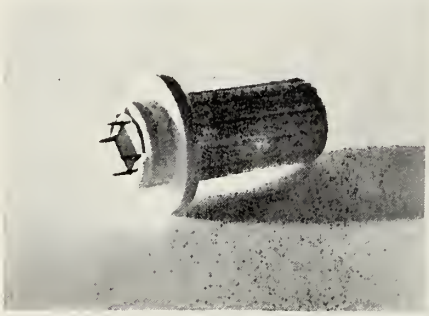


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Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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Enduron: (methyclothiazide) A basic building block for mild hypertensives



Excellent day-long Na^+ output, yet easy on the K^+

Enduron provides an excellent starting therapy. Your patient's sodium excretion is greatly enhanced. Yet potassium loss is low.

The therapeutic action is smooth, and persists for a full 24 hours. With Enduron you can prescribe convenient once-a-day dosage without skimping your patients on day-long thiazide effectiveness.

Of course, as with all thiazides, supplemental dietary potassium should also be considered.

Use Enduron as a basic therapy in patients with mild to moderate hypertension. A single 5-mg. tablet each day is ample in most cases.

Once a day, every day

ENDURON

METHYCLOTHIAZIDE

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

Enduronyl: Its deserpidine component adds response in moderate hypertension



Less frequent rauwolfia side effects than with reserpine

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Enduronyl adds a building block of *deserpidine*. This is a purified rauwolfia alkaloid available only from Abbott. It adds good antihypertensive and tranquilizing activity. Yet its incidence of untoward effects, particularly lethargy and depression, is lower than with reserpine.

Enduronyl is available plain or Forte. The latter provides its variation where most helpful, by doubling the deserpidine.

Use Enduronyl for patients throughout the broad range of mild to moderately severe hypertension.

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METHYCLOTHIAZIDE 5 mg. with DESERPIDINE 0.25 mg. or (FORTE) 0.5 mg.

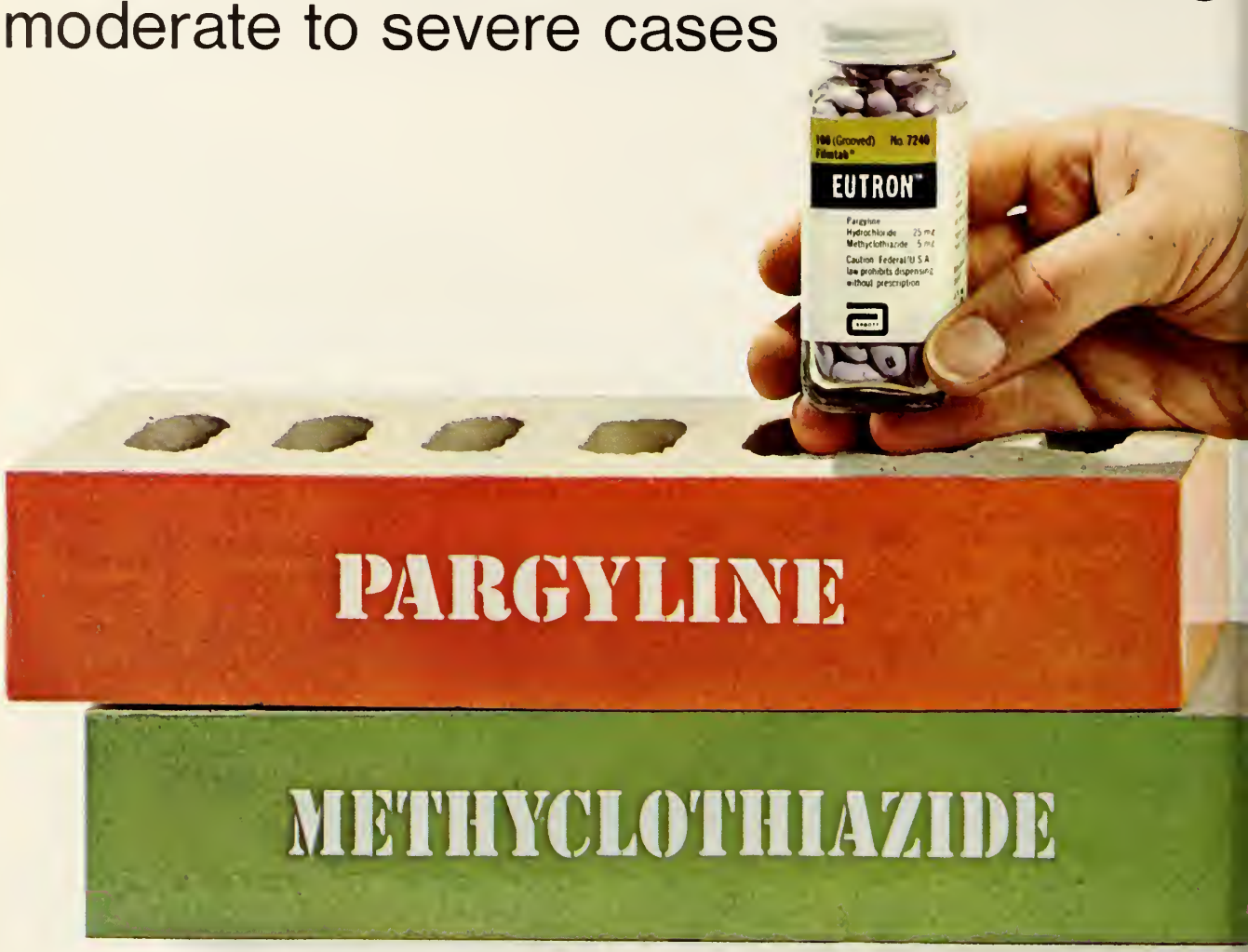
MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

Eutron: A unique combination for handling moderate to severe cases



Affords almost uniform diastolic reduction in all body positions

Eutron lowers diastolic pressures nearly equally, whether your patient is standing up or lying down.

Thus, in clinical trials, average *standing* diastolic readings were reduced from 112 pre-treatment to 90 post-treatment; *sitting* from 115 to 95; and *recumbent* from 112 to 94.

Note that following Eutron, the diastolic reductions were nearly alike in all three body positions.

Use Eutron for managing your moderate to severe cases. Its building blocks enhance each other; hence lesser doses often suffice.

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EUTRON™

PARGYLINE HYDROCHLORIDE 25 mg.
with METHYCLOTHIAZIDE 5 mg.

MILD TO MODERATE TO SEVERE



See Brief Summary on final page of advertisement

801094

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

ABBOTT

TM-TRADEMARK



Tandearil® in Osteoarthritis
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.
Warning: Tandearil is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.
Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reacti-

"Pain Break" for an osteoarthritic.

Tandearil can usually ease it.

At 46, her knees still look good on the outside. But inside, there may be the familiar picture of osteoarthritis.



If aspirin doesn't help, Tandearil often will. Pain and stiffness begin to ease up in 3 or 4 days. You can often maintain response with a daily dose of only 1 or 2 tablets.

Of course, Tandearil is not for every osteoarthritic. Select your patients carefully and follow them in line with the Contraindications, Precautions, Warning, and Adverse Reactions listed below.

But for many aspirin-stubborn osteoarthritics, let Tandearil ease the unwelcome pain breaks of osteoarthritis.

Tandearil®
oxyphenbutazone

vate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis) or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity, angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

For complete details, please see full Prescribing Information.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily. In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and other factors influencing drug response. Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

Geigy

(B) 46-800-A

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

TA-5606AR

When it's time for Thorazine® brand of chlorpromazine



...can you depend on less?

For profound calming effect in moderate to severe mental and emotional disturbances of everyday practice.

Before prescribing, see complete information, including adverse effects reported with phenothiazines and symptoms and treatment of overdosage, in SK&F literature or *PDR*. The following is a brief precautionary statement.

Contraindications: Comatose states or the presence of large amounts of C.N.S. depressants.

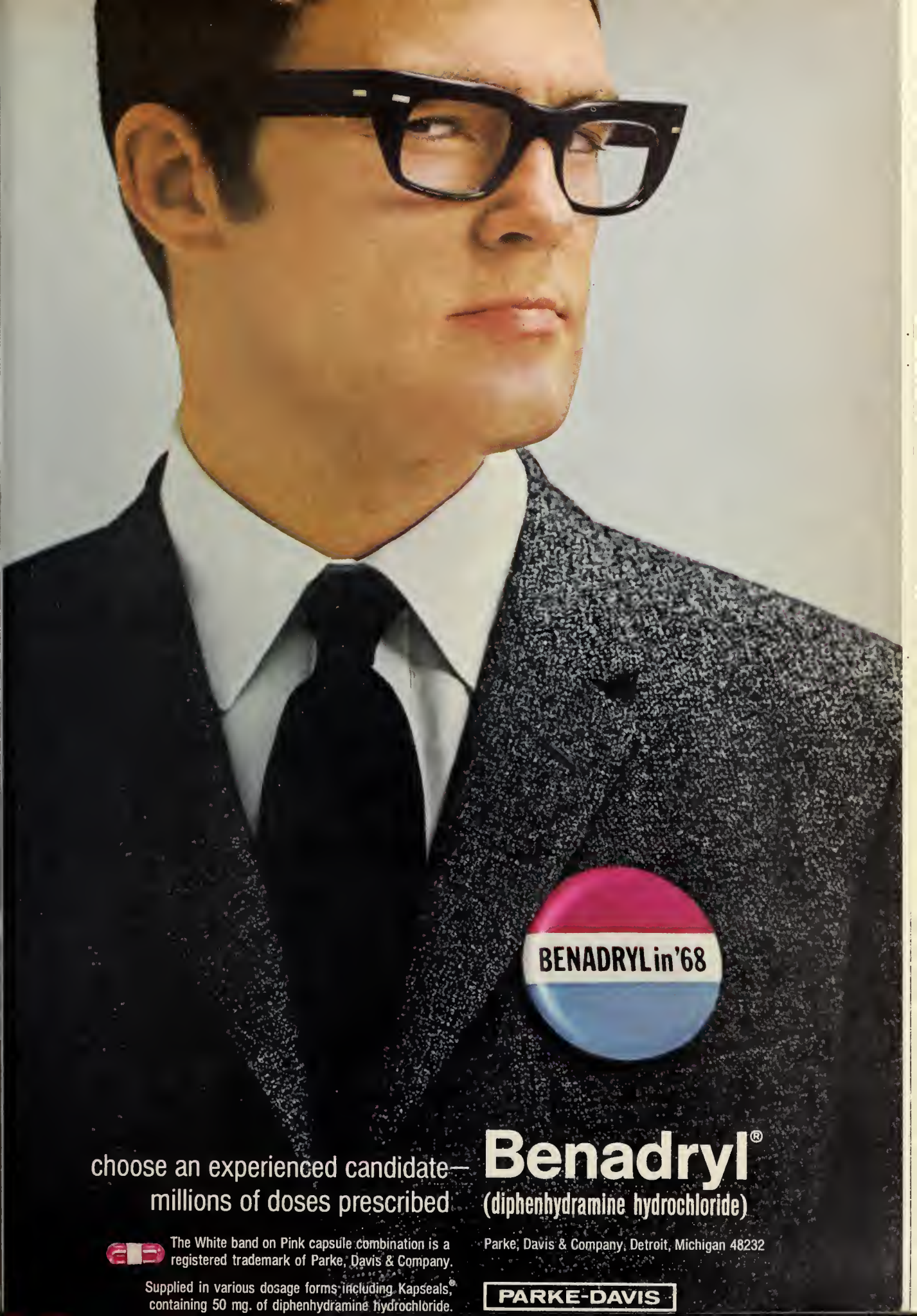
Precautions: Potentiation of C.N.S. depressants may occur (reduce dosage of such agents when used concomitantly). Use with caution in patients with chronic respiratory disorders. Antiemetic effect may mask overdosage of toxic drugs or obscure other conditions. Administer in pregnancy only when necessary. Because of possible drowsiness use cautiously and warn patients who operate vehicles or machinery.

Adverse Reactions: Drowsiness; dry mouth; nasal congestion; constipation; amenorrhea; miosis; mild fever; weight gain; hypotensive effects, sometimes severe with I.M. administration; epinephrine effects may be reversed; dermatological reactions; parkinsonism-like symptoms on high dosages (in rare instances, may persist); lactation and moderate breast engorgement (in females on high dosages); and less frequently, cholestatic jaundice (use cautiously in patients with liver disease). Adverse reactions occurring rarely, include: mydriasis; agranulocytosis; skin pigmentation; epithelial keratopathy; lenticular and corneal deposits (after prolonged substantial doses).

Available: Tablets, 10 mg., 25 mg., 50 mg., 100 mg. and 200 mg.; Spansule® capsules, 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg.; Injection, 25 mg./cc.; Syrup, 10 mg./5 cc.; Suppositories, 25 mg. and 100 mg.

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Smith Kline & French Laboratories, Philadelphia



choose an experienced candidate—
millions of doses prescribed

Benadryl®
(diphenhydramine hydrochloride)

The White band on Pink capsule combination is a registered trademark of Parke, Davis & Company.

Supplied in various dosage forms including Kapseals,® containing 50 mg. of diphenhydramine hydrochloride.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

When it's more than a bad cold



your patient can feel better while she's getting better

Achrocidin®

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In tetracycline-sensitive bacterial infection complicating respiratory allergy, ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle

349-8

now she can cope...

thanks to

Butisol SODIUM®

(SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated.

Butisol Sodium (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety, and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS® [Capsules Butisol Sodium (sodium butabarbital)] 15 mg. (¼ gr.), 30 mg. (½ gr.).



McNEIL McNeil Laboratories, Inc., Fort Washington, Pa.

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Hodgkin's Disease? Syphilis?
Systemic Fungal Diseases?
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or

HISTO?

(Histoplasmosis—"The Masquerader")



A new aid in differential diagnosis

HISTOPLASMIN, TINE TEST
(Rosenthal)

The LEDERTINE™ Applicator with the Blue Handle

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

Lederle

Ask your representative for details or write Medical Advisory Dept., Lederle Laboratories, Pearl River, New York 10965. 406-8

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This isn't the end of the line.

(New TUBEX® are constantly being added)



Only TUBEX® offers so complete a line of closed system injectables

and it's still growing.

To meet your present needs more precisely, the Tubex line comprises 37 different products in 69 dosage variations. And more are on the way.

Tubex offers these unit dose advantages:

- **accuracy**—premeasured, clearly labeled to help ensure correct medication
- **convenience**—no filling, no needle-sharpening, no sterilization, no cleanup
- **simplicity**—precision-made, well balanced syringe breech loads in seconds, permits easy aspiration
- **reduces risk**—single-use cartridge-needle units reduce risk of cross contamination; less chance of spillage reduces risk of contact sensitization for doctor or nurse
- **stability**—glass cartridges can't deteriorate or react with medication
- **acceptability**—presharpened, siliconized needles lessen pain of injection; patients appreciate single-use equipment

Just select, inject, throw away

TUBEX®

Wyeth

UD UNIT DOSE MEDICATION

sterile cartridge-needle unit

Wyeth Laboratories Philadelphia, Pa.



When eating fads of teens or tots Lead to a sudden case of "trots"

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

ROER

WILLIAM H. RORER, INC.
Fort Washington, Pa.



THE BETTMAN ARCHIVE

Just one tablet at bedtime • Prevents painful night leg cramps • Permits restful sleep

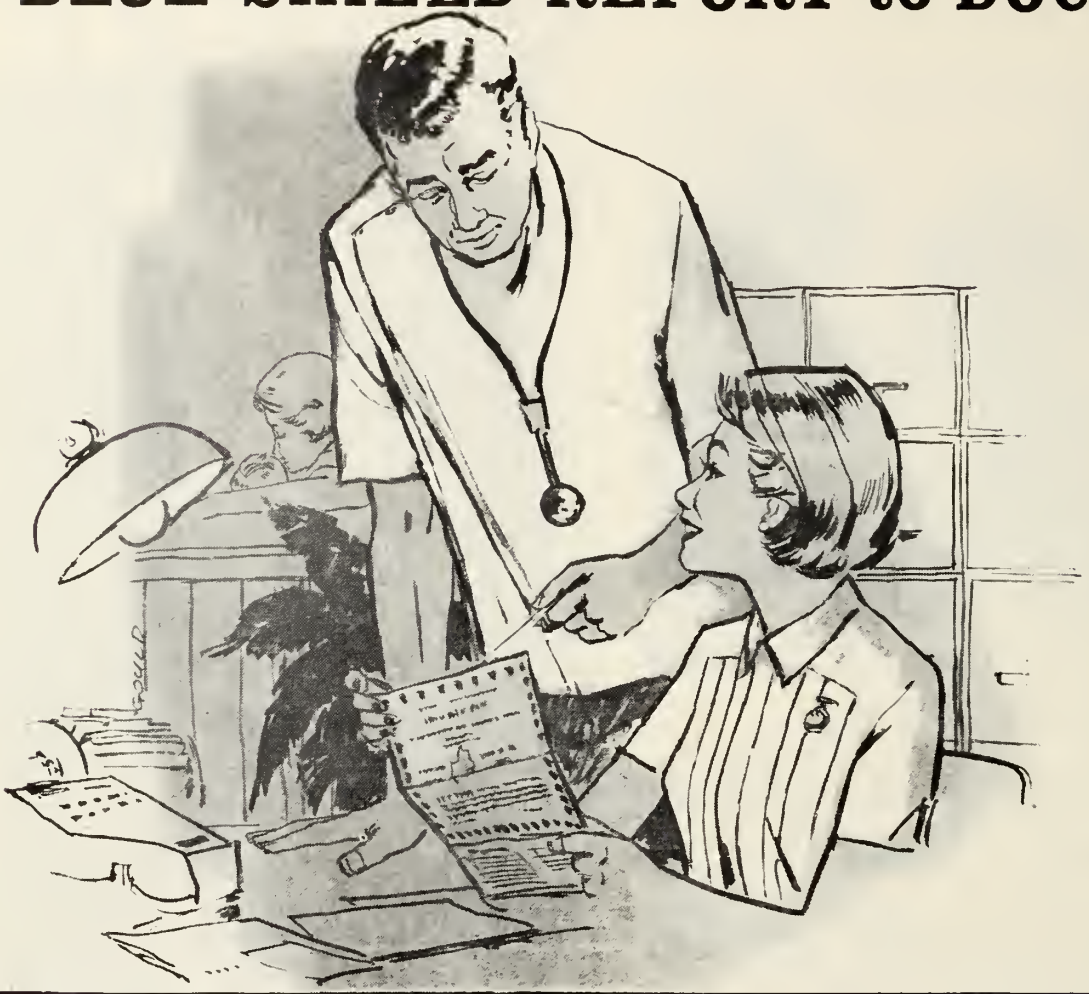
How many of your patients stamp their feet at night and lose sleep because of painful leg cramps? Unless prompted, they usually fail to report this distressing condition and suffer needlessly.

One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

Prescribing information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

A BLUE SHIELD REPORT to DOCTORS



REPORT # 16

Blue Shield Expands Claims Department

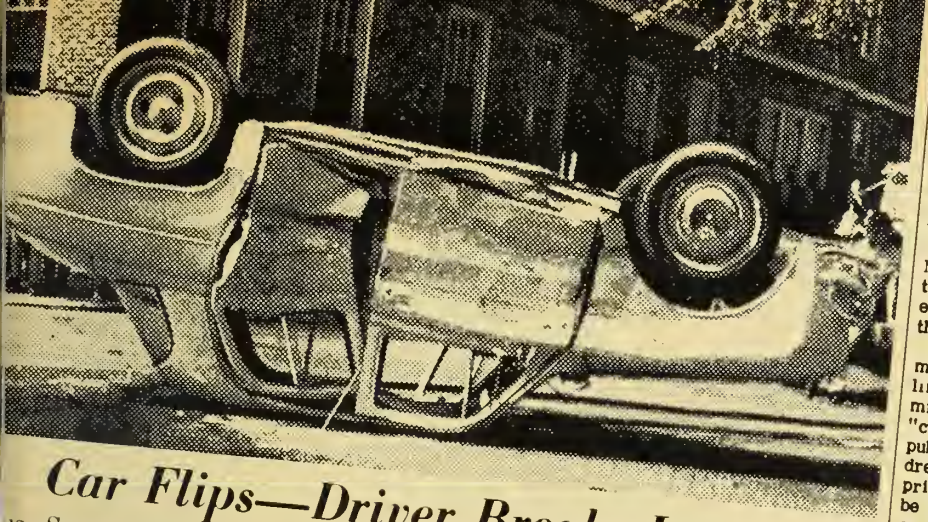
The addition of personnel to the Blue Shield claims department has resulted in a marked improvement in the claims processing time. This is just one step in a continuing effort on behalf of Blue Shield to provide the best possible service to all physicians.

Recommend

®

With Over 800
Participating MDs

ASSOCIATED HOSPITAL SERVICE OF MAINE
509 FOREST AVENUE
PORTLAND, MAINE 04101



Car Flips—Driver Breaks Leg

...us, Sept. 7. John P. Jones of ... incurred a broken leg today ... driving ... Patrolman B. R. Brown, the car hit a fire hydrant and flipped over on its ... Hasn't he ... STAFF PHOTO

...board h... statemer... issue, a... tember t... fications'... ton dicta... Althou... made Mo... down by a... ter shar... flat obje... was pass... Board... McCredi... tion" s... elimir... the st... The ... ment ca... limit ra... mile li... "cut-of... public... dren... priv... be b... or th... schoo... The... so so... rathe... burs...

He's had enough excitement for one day.

For the patient who has been through an accident, the worry and anxiety following the experience may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—*to take the nervous "edge" off,* so the rest of the formula can control the pain more effectively.

Phenaphen® with Codeine

Phenaphen® with Codeine No. 2, No. 3, or No. 4 contains: *Phenobarbital* (¼ gr.), 16.2 mg. (Warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4). (Warning: may be habit forming).

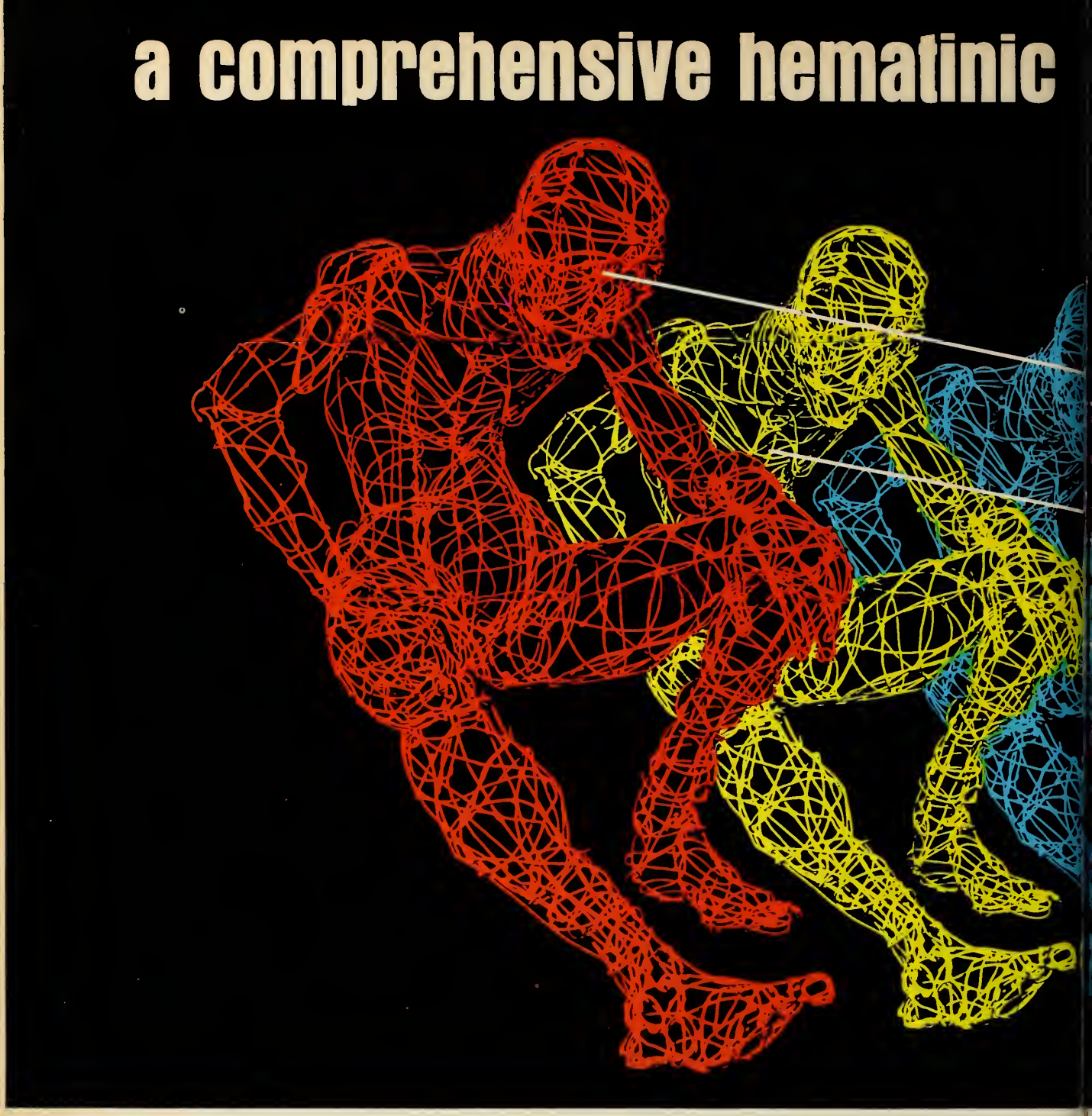
THE COMPOUND ANALGESIC THAT CALMS INSTEAD OF CAFFEINATES

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** 1 or 2 capsules at 2 to 4 hour intervals, or as directed by physician. For further details see product literature.

A.H ROBINS COMPANY
RICHMOND, VA. 23220 A·H·ROBINS



a comprehensive hematinic



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	150	mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin (The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	7.5	mcg.
Iron, Elemental (as Ferrous Fumarate)	110	mg.
Ascorbic Acid (Vitamin C)	75	mg.
Folic Acid	1	mg.

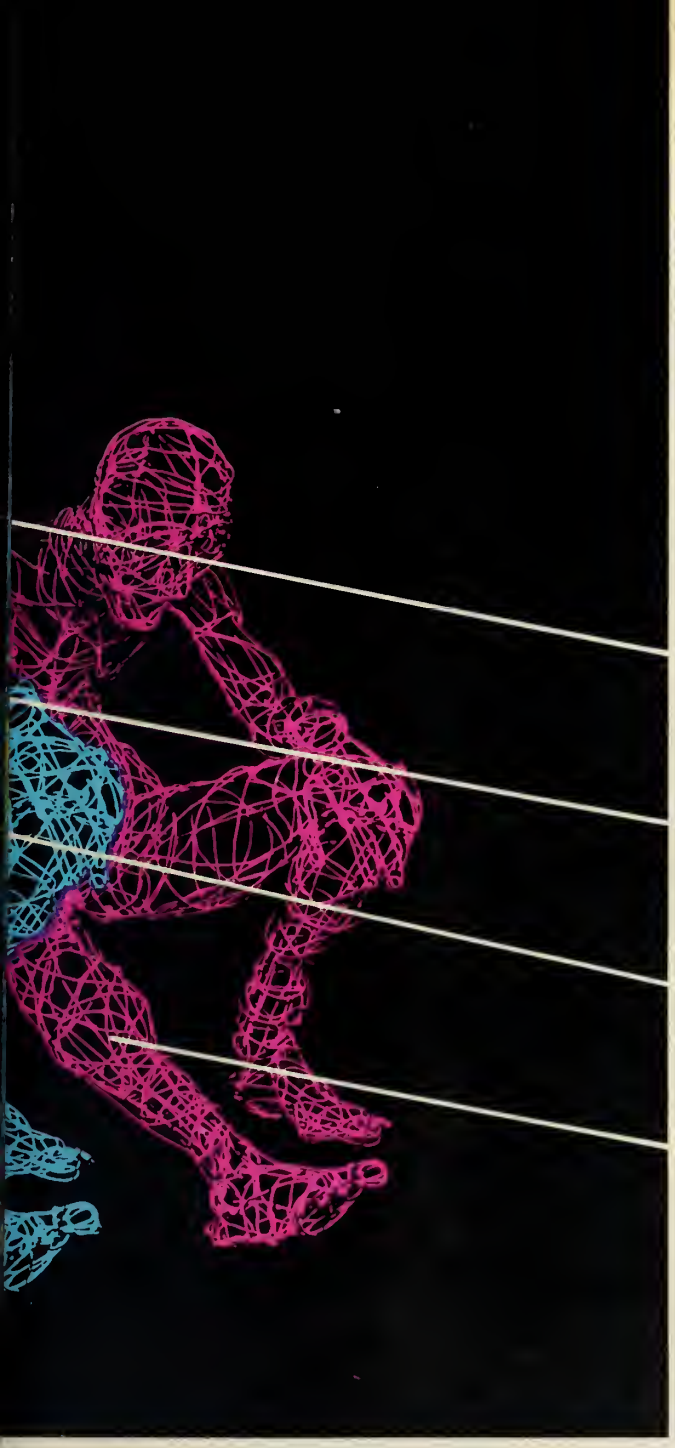
Indications: Trinsicon® (hematinic concentrate with intrinsic factor, Lilly) is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia.

Contraindications: Hemochromatosis and hemosiderosis.

Precautions: Anemia is a manifestation that requires appropriat investigation to determine its cause or causes.

In pernicious anemia, the use of folic acid without adequat vitamin B_{12} therapy may result in hematologic remission but neu rological progression. Adequate doses of vitamin B_{12} (parentera or oral with potent intrinsic factor as in Trinsicon® [hematini concentrate with intrinsic factor, Lilly]) usually prevent, halt, c improve the neurological changes.

As with all preparations containing intrinsic factor, resistanc may develop in some cases of pernicious anemia to the potentia tion of absorption of physiological doses of vitamin B_{12}. If resis ance occurs, parenteral therapy, or oral therapy with so-calle massive doses of vitamin B_{12}, may be necessary. No single reg men fits all cases, and the status of the patient observed i follow-up is the final criterion for adequacy of therapy. Periodi



You can treat combined deficiencies with

Trinsicon®

—the multifactor hematinic

Vitamin B_{12} plus intrinsic factor (15 mcg. B_{12} activity)—helps provide adequate levels of this important vitamin.

Folic acid (1 mg.)—treats nutritional macrocytic anemias and/or malabsorption syndromes.

Ascorbic acid (75 mg.)—augments the conversion of folic acid to its active form and helps iron absorption.

Iron (110 mg.)—treats hypochromic anemia.

clinical and laboratory studies are considered essential and are recommended.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastro-intestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects.

In extremely rare instances, skin rash suggesting allergy has followed oral administration of liver-stomach material. Instances of apparent allergic sensitization have also been reported after oral administration of folic acid.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500. [032568]

Additional information available to physicians upon request.

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Lilly

the antacid puzzle

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aluminum and magnesium hydroxides *plus* simethicone

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will it help "my gassy stomach"?

Mylanta *also* contains simethicone: for concomitant relief of G.I. gas distress.

"will this one taste O.K.?"

The *prolonged* acceptance of Mylanta was recently confirmed in 87.5% of 104 patients – after a total of 20,459 documented days of therapy.* *Danhof, I. E.: Report on file.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. *Dosage:* One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

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Some U.R.I. patients are more miserable than others.

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And let you control the dosage.



Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.
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With Novahistine LP tablets and Novahistine Singlet™ tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever. Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

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Whenever anxiety induces or intensifies clinical symptoms

Librium®

(chlordiazepoxide HCl)

Quickly relieves anxiety~Helps improve response in psychophysiologic disorders~Seldom impairs mental acuity or physical coordination, on proper dosage~ Has wide margin of safety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 50. Libritabs™ (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100. With respect to clinical activity, capsules and tablets are indistinguishable.

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THE JOURNAL
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The Maine Medical Association

VOLUME 59 | OCTOBER, 1968 | NUMBER 10

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.

Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.

Usage in Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.

Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.

Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible adverse reactions of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.

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■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

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First introduced to help restore the flora of the intestinal tract in infants and adults,[1, 2, 3, 4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5, 6, 7, 8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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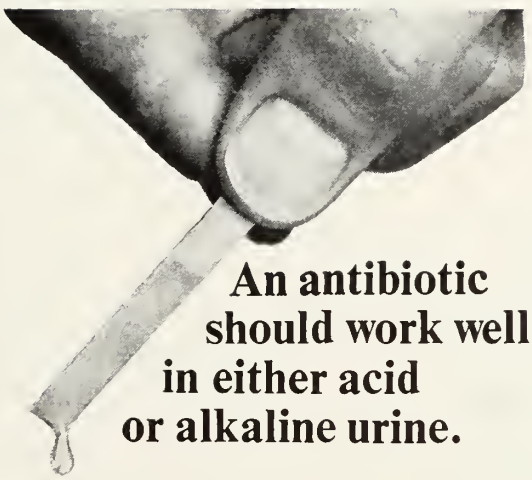
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An antibiotic should work well in either acid or alkaline urine.

It isn't always necessary to adjust urinary pH in treating G.U. infections.

Not when the causative organism is a strain sensitive to DECLOMYCIN® Demethylchlortetracycline, as is often the case.

DECLOMYCIN remains stable and active in either acid or alkaline urine. So there's no need to acidify the urine to keep the antibiotic at work.

Why match the urine to the antibiotic...when you can match the antibiotic to the urine...by prescribing DECLOMYCIN. A b.i.d. dosage makes therapy convenient for your patient.

Effectiveness: DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines in infections caused by organisms sensitive to the tetracyclines.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system – anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin – maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney – rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth – dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Capsules: 150 mg; Tablets: film coated – 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

355-8

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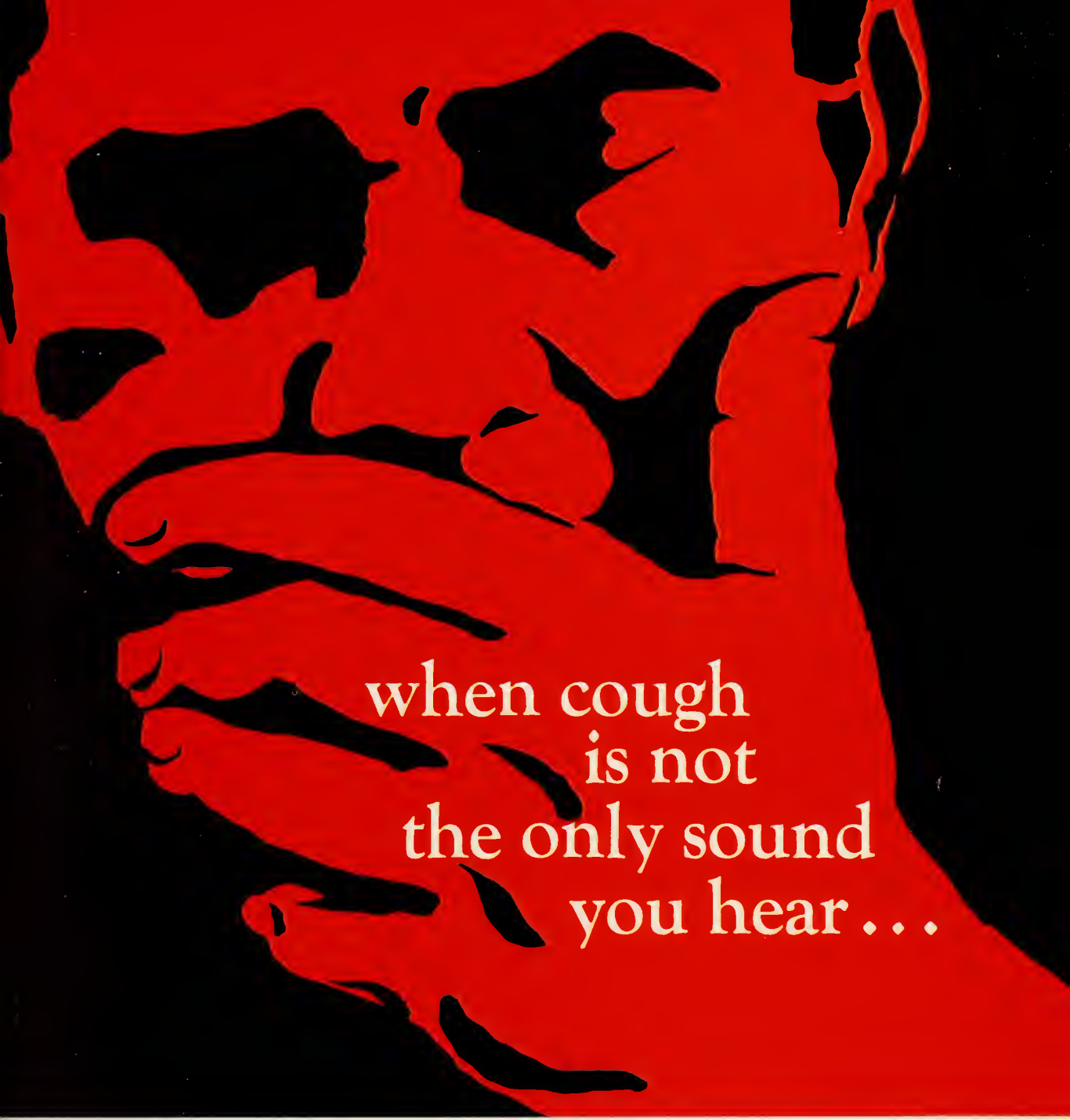
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. . . **because** OMNI-TUSS is indicated for cough associated with upper respiratory tract infections, bronchitis, bronchiectasis, bronchial asthma, emphysema, sinusitis and rhinitis, hay fever, or other allergic conditions. Any of these conditions may exhibit the general symptom syndrome—coughing, wheezing, bronchospasm, and tenacious mucus—which may benefit from the antitussive, bronchodilative, antihistaminic, and expectorant action of Omni-Tuss.

The therapeutic usefulness of Omni-Tuss is enhanced by a unique resin complex formulation providing the clinically desirable advantages of: (1) uniform drug availability throughout an extended period, (2) 8 to 12 hours of symptomatic control, (3) minimal dosage requirement, (4) minimal side effects.

Economical, efficient **b.i.d.** dosage—extremely well-tolerated by children, 6-12, and adults.

'Omni Tuss' Suspension: Each teaspoonful (5 cc.) contains 10 mg. codeine (Warning: May be habit-forming), 5 mg. phenyltoloxamine, 3 mg. chlorpheniramine, 25 mg. ephedrine, all as cation exchange resin complexes of sulfonated polystyrene, and 20 mg. guaiacol carbonate.

Available on prescription only. Class X exempt narcotic. Permissible on oral prescription.

Dosage: *Adults:* 1 teaspoonful (5 cc.) q12h.
Children (6-12 *years*): ½ teaspoonful q12h.

Side Effects: Minimal, but when encountered may include jitteriness, nausea, drying of mouth, insomnia, constipation, which disappear upon adjustment of the dose or discontinuance of treatment.

Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

Strasenburgh

Strasenburgh Laboratories Division
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In the complex picture of moderate to severe anxiety...



there is a new reason for prescribing Mellaril (Thioridazine HCl)

effectiveness in mixed anxiety-depression

Long recognized for its usefulness in the treatment of moderate to severe anxiety, Mellaril is now also known to be effective against mixed anxiety-depression.

Often the symptoms of anxiety states are difficult to sort out—even with the most careful probing. The patient may manifest symptoms of agitation, restlessness, insomnia, somatic complaints. But what of the depression that may be mixed in the total picture? It is reassuring to know that Mellaril may be prescribed—with strong possibilities of success—when there is anxiety alone or a mixture of anxiety and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

Mellaril®
(Thioridazine HCl) 25 mg. t.i.d.

for moderate to severe anxiety and mixed anxiety-depression

SANDOZ SANDOZ PHARMACEUTICALS, HANOVER, N. J. 68-16



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"The inconvenience of a cold"

For a cold, NTz® Nasal Spray provides rapid relief of nasal symptoms. Relief starts with the first spray which opens the inferior part of the common meatus. A second spray, a few minutes later, will shrink the turbinates to help provide sinus drainage and ventilation. Dosage may be repeated every three or four hours as needed, for temporary relief of symptoms. NTz is well tolerated but overdosage should be avoided.

As a sinusitis deterrent, NTz Nasal Spray can be used to keep the nasal passages open during a cold to help prevent development of acute sinusitis—or to help prevent the acute condition from becoming chronic.

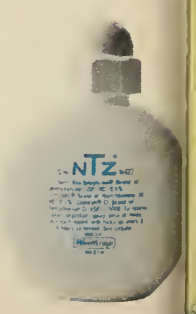
Supplied: NTz Nasal Spray, plastic squeeze bottles of 20 ml.; NTz Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

NTz is more than a simple vasoconstrictor. It contains

Neo-Synephrine® (brand of phenylephrine) HCl 0.5 per cent, the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction.

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(diphenylhydantoin)

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In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.

PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.

DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.

Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67




Knee-deep

in osteoarthritic pain

If aspirin doesn't help, move in with Tandearil.

The trial period is brief: 1 week. Try one tablet q.i.d. at first. Tandearil usually starts working within 3 to 4 days. When response occurs, as little as 1 or 2 tablets daily may hold back pain and stiffness, and increase joint motion.

On the next page is a summary of adverse reactions, contraindications, warning and precautions.

Tandearil.
It can help get his mind off his knee.

Please review full Prescribing Information carefully before prescribing.

For osteoarthritic knees, spines, shoulders, hips, etc.:

Tandearil®
oxyphenbutazone

Tandearil, oxyphenbutazone:
For brief summary see next page.

Geigy

TA-600E



Tandearil®
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy, history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer, perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

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Symposium on Current Concepts and Management of Shock

St. Mary's General Hospital, Lewiston, Maine

March 27, 1968

Edited by THOMAS F. SHIELDS, M.D., Lewiston, Maine

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Pictured left to right are Doctors Howard Frank, Thomas Shields, Mary Dycio, Edward Frank and Paul Zoll, at St. Mary's Hospital Symposium in Lewiston, on March 27, 1968.

PHYSIOLOGICAL OBSERVATIONS IN SHOCK

Dr. Howard Frank:

Our subject today is shock, and shock is a clinical word. I thought it might be useful to begin by talking about a patient in shock. A patient, for example, whom you see often and whom we saw recently – a 70 kilogram, husky, muscular truck driver who came to the emergency ward soon after being involved in an automobile collision. When he entered the emergency ward, he seemed to be in good condition. The evident injury was at his right thigh, and it was thought he had a fracture of the femur. Within the first hour in the emergency ward, it was clear that his arterial pressure was falling, his pulse rate was rising, the fullness of each pulse beat was diminishing, the radial artery that was palpable was narrower, and one could see an increase in the depth of his respirations. His skin became colder and moister, the exposed areas of skin were pale, and spots of skin that were pressed upon and blanched regained their color very slowly. The admitting house officer had put a catheter in his bladder, both to rule out a possible bladder injury, and also to follow the urine output. He emptied a small quantity of urine that had been in the bladder and left the catheter in place. He found no urine production in the next two hours. This is a situation which we all recognize as shock. Our interest in shock comes from our knowledge that this is an unstable situation, and that unless one finds the key to it and corrects it, this patient will die within a relatively short time. Therefore, interest in shock continues over the years.

This man had no break in his skin. There was no ex-

ternal sign of blood loss. None of his major organs were involved in the injury. All he had was a fracture of his femur. Why should such a peripheral injury put a man in danger of losing his life? This was the question that presented itself as a mystery to most of the earlier investigators of shock. The first quantitative effort to decide what shock was all about was started towards the end of World War I, when shock teams under the guidance of men like Walter Cannon went to the battlefields of northern France and Belgium, observed soldiers in shock, and tried to decide what was going on. It was clear that this was primarily a defect in the circulation. Everything pointed to this – changes in blood pressure, the lack of blood flow through visible tissues, but why?

I think many of us recall some of the early notions about "why." Early investigators were impressed, for example, that shock sometimes was delayed in its onset – that, for example, an injured soldier on the battlefield caught under a log in a trench might be alright for quite a few hours while in that position, but then, when released, and brought to what were called resuscitation tents in those days, would rapidly go into collapse and die. The shock investigating commission was so impressed by this observation that they thought that toxic materials that had accumulated behind the injured and trapped part were then swept into the circulation and produced the collapse. It was thought that the toxins acted mainly on the capillaries to produce a general leakage, so that the hematocrit went up, the circulating plasma volume went down, and the patient went into shock. Many of us in this room can recall when this was standard teaching.

In the interval between World War I and World War II a lot of work continued in the laboratory in an effort to simulate this. Dr. Blaylock, who was then at Vanderbilt, undertook in the laboratory to reproduce this observation from the field of battle. He put a tourniquet on the hind limb of an animal so that the arterial inflow and venous return were occluded. The animal was fine and healthy for as long as the tourniquet was on, but when he released the tourniquet the animal very quickly went into collapse and died. This was like the soldier. Dr. Blaylock then did a hind quarter dissection of those parts and weighed the injured parts. He was able to show that there was a sufficient accumulation of fluid in the tourniqueted-and-then-released extremity to account for shock on the simple basis of fluid loss from the circulation, without invoking additional factors of toxins or neurogenic influences. Subsequent work has established this. This is not to say there are not additional influences, but blood volume replacement alone will bring that animal, that soldier, and our truckdriver back into a decent state of circulation.

I have some notes here on the actual measurement of the truckdriver's volume. It was found that his circulating blood volume was 3600 cc. and the hematocrit was 40%. We didn't know, of course, what his normal volume was. We had not had the opportunity to measure it before, but we did know on the basis of his weight and body construction that one might have expected him to have a blood volume of 6000 cc. This fits very well with very many observations in World War II and the Korean conflict, that when a patient, soldier, or injured person is in shock due to blood volume deficit, he has lost at least 40% of his circulating blood volume. This immediately reduces some of the mystery that was present in the era before blood banks, when the idea of giving a transfusion was equated with restoring blood volume. The fact that 500 cc., 1000 cc., or 1500 cc. might not correct the shock state was what, in part, gave credit to the idea that there were other more mysterious factors operating. His normal hematocrit was 40% and his post-injury hematocrit was 40%, because in this case, he had lost virtually whole blood into the thigh.

One of the things we all need to teach ourselves over and over again, is how much blood and plasma can be lost into soft tissues without it being obvious. Here is an emergency ward observation of which all of us need to reconvince ourselves, that this thigh, which doesn't look terribly swollen, can have this much blood seep through the tissue planes and with time, if the man recovers and begins to recuperate, he will return fluid from extra-cellular spaces, not red cells of course, so that with time his volume will go up and his hematocrit will tend to go down. Of course, we know that one cannot use this as evidence that bleeding is continuing. In this instance the falling hematocrit indicates that plasma volume and total blood volume are being restored. If the injury were more of a crush or a burn, so that the predominant loss was plasma rather than whole blood, the hematocrit might have been 60% instead of 40%.

We now have a pretty good idea of the effect of blood volume loss on the whole patient on the basis of observations in man, as well as in animals. We know, for example, that in the patient who is shy of blood volume, the venous return to the heart, what we might call the cardiac return, is diminished. The pressure and volume of blood in the venous system is reduced. Because of the reduction in return flow to the heart, the cardiac output is reduced. I say "because," since if one restores this by refilling the normal blood volume, one returns to a normal cardiac output. The reduction in cardiac output tends to produce a fall in pressure on the arterial side. We notice that a fall in pressure on the venous side has preceded this. The drop in arterial pressure is combated by increased activity of the sympathetic nervous system. This is most manifest in those tissues which are most strongly under the influence of the sympathetic nervous system. Skin vasoconstriction becomes marked. Renal constriction becomes marked. Certain other vascular beds, the coronary system, and the cerebral system are less influenced by this reaction. The effect of this is to produce many of the clinical signs that we recognize – the tachycardia, the vasoconstriction, the sweating. This sympathetic reaction undoubtedly contributes to the reduced renal blood flow.

In consequence of these things – the vasoconstriction, the reduction in cardiac output, the reduction in arterial pressure – and because arterial pressure will fall in spite of the compensatory mechanisms, the crucial thing happening is that tissue blood flow falls, it slows, and it is reduced in total amount. This is true of all tissues and the effects of this can be seen in all tissues. The patient as a whole is in a catabolic state. Energy reserves are being depleted. High energy phosphate stores tend to disappear. Glycogen disappears from tissues. Lactates accumulate. Acid products accumulate in the blood. Blood flows slowly through the tissues allowing it to be abnormally deoxygenated. The arterial-venous oxygen difference widens. If you are seeing a wounded part or a wound in the operating room, you become aware that the venous blood is abnormally dark.

If you study the venous blood chemically, you find that it has an undue accumulation of metabolites because of the slow flow through the tissues, and not just because of the slow flow through the tissues in general, but because the specific modulating tissues – the kidneys, the liver, the lungs, etc., which normally compensate for metabolic disturbances – also suffer from this overall reduction in blood flow. Thus, the corrective effects that one would expect are not forthcoming, and, therefore, the blood nitrogen rises. Blood urea nitrogen, blood ammonia nitrogen, phosphates, and sulfates accumulate in the blood. Intracellular substances become evident in the circulating plasma, things that don't belong in the plasma, such as adenosine compounds. Potassium may rise. An injured patient in shock who is not putting out urine will have an accumulation of potassium much more rapidly than a patient who does not have kidneys. Changes in potassium can become lethal within hours in patients who have the combination of no kidney function and injury, and if you add transfusions of whole blood to that and give him an extra load of potassium, the situation becomes more dangerous.

The pulmonary aspect of shock, this lesser circulation, is next to be discussed. In the laboratory animals and in soldiers who were healthy before injury, it usually does not contribute significantly to the shock disturbance. The arterial oxygen saturation tends to be normal for as long as the soldier or the laboratory animal is breathing, and there is usually no evidence of abnormal pulmonary function. But, this is far different in the shock patients that we all treat in our civilian hospitals. I would emphasize the fact that much of what we know about shock in terms of observations in blood gas analyses and kidney analyses, etc., has been obtained from people who were healthy before injury; whereas, most of the patients in shock that we take care of are elderly, and have visceral and vascular disease which is antecendent to the onset of shock. Therefore, one cannot always transpose these published observations directly to them.

Now for the pathology of shock. Shock itself, insofar as one can tell by gross observations or by standard microscopy, does not have a characteristic pathologic anatomy. It is a physiologic disturbance and the patient is likely to die before there is much structural change. The electron microscopy of shock is just beginning to be studied, and there is no doubt that changes will be found. Some have already been found in vascular smooth muscle.

The complicating pathology of shock has been recognized for many years. Dr. Zoll and his colleagues were among the first to conclude that during the period of low blood flow and low blood pressure that characterizes shock, the blood flow through already-narrowed blood vessels may become inadequate. A patient who is getting along marginally with coronary artery narrowing may develop overt myocardial ischemia or infarction during the period of shock. There may be thrombosis within the narrowed vessels during that period of low flow, or there may be infarction without the thrombosis. The same is true in circulation to the brain or other parts. Therefore, it is important for us to prevent shock in addition to treating it, and to prevent even brief periods of shock, because, especially in our elderly patients, they may sustain permanent damage.

The experience in the Italian campaign of World War II indicated a previously unrecognized lesion, an injury to the kidney, which became known as the "lower nephron nephrosis." This was seen in men who had recovered from shock, but then became oliguric, hypertensive, and uremic. This was great stimulus at that time for the development of dialysis methods, because it was evident that these kidneys should recover if the man could be tided over for a relatively brief period, and this proved to be the case. So, there is an example of complicating pathology. Gastrointestinal hemorrhage and mucosal hemorrhagic ulceration is quite characteristic in human shock, probably because of the very rapid rate of turnover of the mucosa of the intestinal tract, which makes it vulnerable to these periods of poor blood flow.

The present interest comes back to the lungs. A recent conference in Washington was held on the pulmonary lesion in nonthoracic trauma. The present availability of blood gas methods and measurements makes it easy to recognize the fact that there are patients who, in the recovery phase from injury, with or without shock, may show inadequate oxygenation of their arterial blood. They act as though there is a shunt of venous blood passing through the lungs. Even though you change the patient to 100% oxygen breathing, there is no improvement in arterial oxygen saturation. There is great interest in this lesion and considerable disagreement as to what makes it. Is it an intrinsic lesion, a response to injury which we are now seeing because we don't allow the patient to die in phase 1 or phase 2, and we reach phase 3 and find this; or, are we partially making this lesion by overloading patients with fluid and producing interstitial edema, etc.? Does vasopressor therapy have a bearing on this? These are the most recent questions.

One does not need a cardiac catheter, a cardiac output measuring device, or any other sophisticated equipment

to evaluate the state of the circulation of a patient. It is helpful to all of us that such measurements as blood volume and cardiac output, etc. have been made. At the bedside by observation of blood flow through skin, the state of the peripheral arterial pulse, the state of the venous filling, and the venous pressure, one can recognize substantial degrees of reduction in blood volume and reduction in cardiac output without measuring equipment. The "rules of thumb" that relate to blood volume, that shock means at least a 40% to 50% reduction in blood volume, are helpful to us in guiding our treatment. The house officer who visits the patient as his last move before he goes to sleep, can, by just putting his fingers on the pulse of that patient, without turning the light on in the room, become aware of skin temperature, skin moisture, pulse rate, pulse volume, pulse pressure, and know a great deal about the state of the circulation of the patient.

Our truckdriver was in trouble because he lost whole blood. All that we need to do to make him well is to stop the continuing blood loss, restore the blood volume, and that's an end to it. He had a primary loss in blood volume which, in his case, we decided was mainly whole blood.

We know whole blood loss also can be external or internal into the gastrointestinal tract. It can be a sequestration, such as if you put a ligature around the portal vein and see the accumulation in the venous side; that blood is no longer in circulation. There can be primarily a plasma loss, as it would have been if it were peritonitis causing an outpouring of plasma, or a burn, or a crush injury. It could have been a loss of total extracellular fluid, as in extreme diarrhea with a fistulae, or with the overuse of diuretics. We know, however, that this total peripheral picture of inadequacy of the circulation, that we call shock, could have started with the patient having a myocardial infarction without any necessary change in blood volume. We may wonder also if this is an acute pulmonary embolization, a cerebral hemorrhage, a ruptured aneurysm, or something else. Thus, as we understand it, the cycle starts with an acute reduction in the ability of the heart to perform its function of increasing the pressure and moving blood forward. The consequences then follow.

We know too that sepsis can do this, that the patient with biliary tract disease, who develops cholangitis and septicemia, may initially present with shock. Not infrequently shock is the presenting symptoms of sepsis – in peritonitis, for example, time and again this sudden development of shock is the first indication that there is anything wrong with the patient, before there are abdominal symptoms or signs.

How does sepsis produce shock? On this we have much less quantitative data for the obvious reasons that many of these patients are not suitable subjects for this kind of study. We can say, in general, that many patients who develop shock due to sepsis also have reduced blood volume. Peritonitis is the classic example of this. The patient with peritonitis or pancreatitis will have an exudation of plasma and will have a sharp reduction in blood volume, notwithstanding the effects of bacterial toxins. We know that the bacterial effect is crucial, because restoration of blood volume alone does not have the restorative effect in septic shock that it does otherwise. Certainly it is desirable to restore blood volume if you can, but the key to caring for this patient is the control of sepsis by whatever means are required – perhaps an antibiotic will do it if it is a septicemia, or perhaps you need to operate and vent an intestinal fistula if there is an intraperitoneal leak. Whatever one needs to do surgically, or any other way, is what is required to bring this patient out of shock. However, in another large group of patients the blood volume will be unchanged in shock due to sepsis.

The pharmacology of the bacterial toxic effect is a fascinating subject which is just being opened. There are bacterial toxins that have specific actions that are identifiable upon myocardium, upon major blood vessels, upon capillary membranes, and upon all elements of the cardiovascular system. Shock itself reduces resistance to infection. This is the reciprocal of what we have just said. This can be demonstrated very nicely in the laboratory, and I think it is an important factor in what we need to think about. For example, when we were working in the laboratory attempting to produce shock by sepsis in dogs so that we might study some of these things, we found that we could inject millions of healthy virulent bacteria of different sorts into the blood streams of healthy dogs and we were never successful in having them take hold. The animal tissues cleared them, the blood became sterile, the tissues became sterile, and the animals dealt with them. But if we invoked even a brief period of shock; as for instance, by taking a dog at the same blood pressure, then dropping him to a lower blood pressure for one hour, and then restoring the blood volume that was withdrawn; no prolonged period of shock ensued, the animal returned to normal pressure. Insofar as you could tell by any measurements of this sort, he was just as normal as before, yet before, he could handle millions of bacteria without any difficulty. After one hour, twelve hours, and even 36 hours later, his ability to deal with injected bacteria was substantially reduced. These bacteria would grow in his tissues and ultimately kill him. The same kind of observations could be made with toxins. Rabbits were more convenient than dogs. The animal lethal dose of endotoxins for rabbits was changed by a factor of 10,000 by a brief period of shock that in itself did nothing observable to the animal.

The last point I would like to make on a general basis, is to refer to the term "irreversible shock" with an effort to see what usefulness it has and with the suggestion that we not use it at all in clinical thinking. In the laboratory in trying to discover what are the crucial factors in shock, what are the systems that fail, what makes the difference between living and dying, one wishes to purify the situation. One eliminates trauma, one eliminates gen-

eral anesthesia, one takes a healthy animal and just reduces blood volume with a needle introduced into a blood vessel. If you do such a thing, the dog, for example, will tolerate reduction in his blood pressure from wherever he might have started, to a blood pressure of 30 and will continue to breathe, will continue to follow you with his eyes, and will remain alive, (not true under anesthesia but true without anesthesia), and if after an hour you return the amount of blood that he lost, he is likely to recover and be well. If after two hours you do this, a certain percent will recover and a certain percent will make a transitory improvement, and then go on and die. If you do this after three hours, this mortality becomes heavier, and in four hours perhaps 80-85% will die. Enough of these have been done so that one can predict statistically the behavior of groups of animals in these phases. There is no predicting the behavior of an individual animal. We have seen a single animal that died after an hour of shock, and we have seen a single animal that survived after 12 hours of shock.

The word among laboratory people who were interested in this problem – this whole circumstance of bleeding out, waiting, restoring blood and then finding that the restored blood does not correct the situation – came to be called "irreversible shock." It's a bad word because "irreversible" is a prediction. What is really meant is that it is "unreversed." It is unlikely that there is any true clinical counterpart to this. This is a useful thing in the laboratory to isolate factors, but in the patient the addition of recurrent bleeding, or insufficient blood volume restoration, or supervening myocardial infarction, or infection of the injured part, are now complicating circumstances. Therefore, I object to the use of the word "irreversible" in clinical management, because it implies that there is something hidden beyond our knowledge which has come into it, and we might just as well give up, because the situation is out of hand.

Clinical Observations in Shock and Management

Dr. Edward Frank:

About 20 years ago there was a war which provided again stimulation and discussion in the treatment of shock. Our laboratory, under the guidance of Dr. Jack Fine, became interested in studying the kind of things that have been discussed – the dogs in shock starting with purified hemorrhagic shock, and then in the mysterious development of bacterial factors. Even in these animals, after prolonged periods of sterile hemorrhagic shock, we discovered that one could demonstrate the genesis of bacterial toxins, largely endotoxins, in the circulation of such animals after prolonged periods of hemorrhagic hypotension, and after a variety of situations that produced low flow states. This brings another definition of shock: diffuse, persisting, low flow state such that the tissues in general, and some more specifically than others, are suffering from lack of profusion. The dog has a better heart than any of us in this room, and he also has better lungs. Therefore, in our writings we didn't discover terribly much wrong with pulmonary and cardiac systems, and tended to focus elsewhere.

The "focus elsewhere" still holds true, but what I'm about to tell you now is based upon the efforts of a few of us from that same group to go to the bedside of people in shock, and most of the people we have been studying have been the kind with whom most of you have been dealing, elderly folk – many of them in septic shock, some of them traumatic, none of them pure, none of them with a needle in an artery that has bled them out a specific amount over a specific amount of time. They have a mixed kind of injury, or pre-existing diseases of all sorts involving many organ systems. They are people who have reacted in a variety of ways and are very difficult to manage, because as we focused on one aspect of their difficulty we found that they were in trouble elsewhere. In the past 7 years, we've studied about 100 such patients making use of the total physiologic monitoring systems that we now find available at the bedside. Such systems are now available and can be used without injuring the patient. Thus, we feel that for the very tough ones, it does help a great deal to use them.

We first started with a patient that was very sick, and surrounded him with equipment such as cardiac output devices used in catheterization labs. The equipment was placed on a wheel cart so it could be moved in when we wanted to make a measurement and moved out when we didn't. We used systems for monitoring arterial pressure continuously. This requires special mention. We do indeed feel that arterial pressure does have a meaning, even in this modern day and age, when those of you who are reading the physiology of shock find statements to the effect that, "it doesn't matter what the patient's blood pressure is as long as he has adequate blood flow." Well, I'd like to nail this notion that blood pressure does not mean anything, because I'm quite convinced, in seeing people suffer many complications of low arterial pressure from their rickety coronary arteries or rickety cerebral arteries, that you pay a severe price for this. In other words, when the pressure falls below critical levels in these people, there will result lethal complications, either in the heart or the brain.

Our equipment includes a respirator of one sort or another which can take over when the patient is unwilling, or unable, to breathe for himself.

Most important of all to us has been a flow sheet. There are a lot of things going on with these very sick people. What we do is to tack a large piece of graph paper on a convenient wall and put horizontal lines on it. In each of these horizontal channels, with one a concurrent time axis, one can fill in all the parameters in which one is interested. This can include arterial pressure, heart rate, respiratory rate and respiratory assistance if that's going on; blood volume, and hematocrit. If you are making measurements of other physiological

parameters, one can include cardiac output, central venous pressure, blood gases, and blood chemistries. In other words, anything that you think can be useful in the management of the patient.

In the beginning we said to ourselves that our purpose was to cure the patient that we had, and we've been sticking with that ever since. We've been getting good results. Therefore, I pass along to you the notion that it helps to monitor these people carefully so that you can, on the basis of this minute's blood gases or blood chemistries, make an appropriate adjustment this minute, not tomorrow, or not tonight when you return.

You can't make rounds on people in shock. You must stay with them, and perhaps the hardest part in this kind of approach is people. What you must have is a couple of doctors, preferably two, because they help each other to think, and help each other to stay alert to all the problems that this one patient in the middle is producing or having. These doctors have need to be detached from all other responsibilities and pleasures, and need to be available at any time of the day or night so they can latch on to this critically ill, perhaps mortally injured, person and stay with that individual until the game is either won or lost. That time is usually somewhere between 12 and 24 hours, and I must say that some of these people are still in limbo after that. But, the hard battle is the first 24 hours, and usually the first 12 hours. If you can make the proper adjustments very early, you'll solve the patient's and your own problems early and not get involved in an exhausting struggle for both of you.

When we first did this, our clinician friends said to us: "Gee whiz, you can't do that, my patient's too sick." Now they know that he's too sick *not* to have some of these studies done. You tack on the patient a small cutdown in the antecubital fossa. A catheter is placed in the superior vena cava without fluoroscopic guidance. We don't move these people around. We're a rather unique shock team with our attitude. What we need is a two-bed area as opposed to a one-bed area. It's not the same area all the time. If this patient is on one of the floors, we have the hospital clear the bed from the next stall, if you will, in that two-bed area and use that space for our equipment which had been dispersed, put away in a closet to await the next problem or the next patient in shock to come along. To that extent it's a saving in hospital budgets, because there's no dead storage, there's no dead space assigned to shock equipment, or no clinical space assigned which is not in active use.

We have now over 100 cases, and in reviewing these, 3 out of 4 patient had significant respiratory problems, half of them had significant cardiac problems, and more than half had significant cerebral and renal problems.

The kinds of respiratory insufficiency that we have in our patients have fallen into these general categories:

1. If there is insufficient flow to the brain, obviously the brain, including its respiratory center, will fail and the patient will not breathe adequately. He may either underventilate, hyperventilate, or may stop breathing on the basis of cerebral inadequacy.

2. Airway obstruction has been a very serious and a continuing problem for us. We have a patient right now in our own Intensive Care Unit who is in serious trouble because he was allowed to aspirate while under our observation. This can happen in various ways. It means that people who are in shock, who are obtundent, who are confused, who don't have good cough reflexes, can very easily have gastric juice come up the esophagus and down the trachea, and you hardly know it's happened. It takes a little hypotension and a little cerebral confusion to set the stage for this, so that certainly we don't permit these people to have anything orally. We tend to put a tube down the stomach in every instance to make sure the stomach is empty. If there's any accumulation that's continuing, we'll leave the tube in the stomach. I, as a surgeon, have come to the point where, when I'm dealing with someone with profuse peritonitis, and I suspect they are going to have a stormy time post-op, I'm apt to use a gastrostomy immediately, so that there will be drainage through the abdominal wall without making use of a chronic nasal-gastric tube. Chronic Levine tube or any nasogastric tube is a hazard to the upper airway, it irritates the epiglottis, it permits respiratory infection, it's uncomfortable, it demoralizes the patient. But watch out for airway obstruction due to aspiration of gastric content. It's hitting our patients all the time and it's lethal. It takes a little bit of gastric juice to kill immediately by obstruction, or the following day by a horrible kind of pneumonitis.

3. Physical exhaustion we see commonly. If you watch these people in shock, you'll notice the hardest work they are doing is breathing. The breathing is going apace and the patient is helping by huffing and puffing. It's exhausting to do that, and the patient who does that for 6 or 7 hours becomes physically tired, the respiratory muscles and the diaphragm become exhausted, and then they start to underventilate. At first they hyperventilate, and that's important because of acidosis in shock, but our experience now teaches us that early in shock there is apt to be alkalosis due to hyperventilation, so that you should not take the bottle of alkali solution off the shelf the moment the patient arrives in shock, because at that moment, the patient doesn't need it. He may need it 3 hours later, but not right then. And preferably, he doesn't need it until you've measured his pH and his gases.

4. Respiratory overload indicates that he is extremely catabolic, especially if there is sepsis. But even without sepsis, it can be due to the acid products coming out of the tissues. So this is not a primary problem of the lung, it just means that the lung is unable to keep up with the CO_2 being produced.

5. Central nervous system effects of toxins are more easily demonstrated in animals, but they certainly happen in man. You've all seen people who are confused or comatose due to infections without shock, and certainly

it happens with shock. We've learned not only to use respirators as needed, but we've monitored these patients with appropriate blood gases. What I would say to those of you who are now thoroughly aware of the use of respirators, is that you must also know when to quit. If you use these devices, especially when you use endotracheal tubes for prolonged period, or tracheostomy tubes for a prolonged period, these procedures are not without their hazards. A tracheostomy can kill, it can erode the trachea, it can cause bleeding, it can cause infection, so that you don't use this procedure lightly. Some of the groups would tend to feel that an endotracheal tube put in through the nose or mouth is better early than a tracheostomy. We don't go to tracheostomy unless we're really pushed to it, because we're paying a high price for it.

If you measure the arterial oxygen saturations in half of the patients who are in shock, most of them septic shock, most of them elderly, you'll discover that they do indeed have arterial oxygen saturations which are deficient. This is not true in the writings from our laboratory, or from any other laboratory dealing with animals. The dog will die with an arterial oxygen saturation of over 90%. Not so in man, because man has the kind of complications that I described before; his diaphragm doesn't work very well, he develops atelectasis, he may have some pre-existing pulmonary disease, a little emphysema, a little chronic bronchitis, all of which add to the fact that he has a pulmonary problem that the dog does not. He's apt to have a low pCO_2 early in shock along with a high pH from respiratory alkalosis, so don't give him an alkali at that time.

We had 7 deaths in our first 35, all seven were cerebrovascular. That's a tremendous number, 1 out of 5. This could have been counteracted best by preventing hypotension below a critical level. What is that critical level? It's a little bit hard to tell you, but in general, I would say that in elderly folk systemic arterial pressures below 80, sometimes 90 if the patient was hypertensive before he went into shock, may not be well tolerated. The young Marines in Vietnam now will tolerate 60 to 70 because they have goot patent arteries, more so than the older people that we deal with in our hospitals. If you let the arterial pressure fall below those critical levels, this kind of provocation will kill our patients. This is because the physiologists tell us, and we know from our own data, that blood flow to the brain is almost linearly related to aortic arch pressure, and this is true also for coronary artery flow. So it's under these circumstances, when we can't keep the pressure above a critical level any other way, that we are more than willing, in fact we insist upon using, a vasoconstrictor agent of some sort. What sort it is I don't think matters terribly much, as long as we keep the patient's pressure above that base-line.

How do you monitor the cerebral state? We did a good deal with EEG's and we discovered that this really doesn't help you much. The best thing we know how to do nowadays is to talk to the patient. If he's getting a little fuzzy, confused, or sleepy for no good reason, we check the pressure, and then see how he is when his pressure is up 10 mm. of mercury. Sometimes he awakens suddenly and starts to communicate again. That tells us that his cortical cerebral flow has been compromised at a lower pressure.

For the heart, what we have been doing is to monitor constantly with a bedside oscilloscope, and if we see arrhythmias of any sort, or if we see ischemic changes in the tracing, we are apt to try a slightly higher arterial pressure to keep the patient so that he doesn't develop these things, or develop further complications which may be lethal.

The question was asked before about cardiac insufficiency and shock, and there's been a great deal of discussion about this. It's hard to create heart failure in the dog in shock, because he has a better heart in relation to his body demands than we do. But not so in man, and in our data (and physiologically there are a fair number that go into heart failure as a result of, or concurrently with, shock) it's easy to imagine that during the total demands of the patient in shock with decreased coronary flow, with the effects of bacterial and other noxious factors, other changes in pH, and changes in potassium, that the myocardium might not function as well during shock as it did before when it was normal. Physiologically, we've seen a fair number of patients who have gone into heart failure during shock, who had not been in shock before. Some of them, of course, had pre-existing myocardial insufficiency and we have seen pulmonary edema which can be lethal. We've seen pulmonary edema occurring in people with normal measured blood volumes, meaning that it is possible that a person in septic shock cannot tolerate the same blood volume as the same man could before he was in shock.

We are finding good use for rapid-acting digitalis preparations in these people who have normal blood volumes and high central venous pressures (CVP). In many instances, the CVP will come down within 30 to 45 minutes, the lungs clear, and we're happier about the whole situation. If you push it too hard, you'll discover that you can create arrhythmias with digitalis just the same as you can with noradrenalin and any other drug. My impression at the moment is that the patient who is in shock needs a little bit less digitalis or rapid acting glycoside than the patient who is not in shock. I have the naive notion that perhaps he's not metabolizing these agents as rapidly as the normal individual, and therefore needs less to digitalize him. We're finding that the dose for such people is perhaps 75% to 80% of what it might be in the normal. So we creep up on it a little bit more slowly just to avoid arrhythmias caused by such drugs.

You are all aware of the fact that the patient who is in renal failure may develop problems with potassium or with acidosis. This can happen very quickly in shock, especially in septic shock, because the catabolism is

rapid, breaking down the tissue mass very rapidly, spilling out potassium, phosphates, and sulfates from injured cells. The patient may be anuric and not able to excrete them. Under those circumstances the patient may go into a lethal degree of potassium intoxication within an hour. Of course, it's quite different from the fellow who has primary renal disease and who is anuric because of renal disease, who can go along for days or weeks before you need to do anything about acidosis or potassium intoxication. So watch out for it. Once you're alerted to the possibilities, you can make serial measurements of what's occurring in the electrolytes every few hours while you're watching the patient who is in shock.

Let us now consider blood volume replacement. You can give blood by the seat of the pants, meaning until the blood pressure goes up. If you do that too vigorously, you will have pulmonary edema before you know it. You would like not to do that because that can kill the patient. If you measure the central venous pressure, you may have a guide which will help you stay away from that, but it isn't the total answer. One can have decreased blood volume and a high central venous pressure, or the other way around. One can imagine physiologic circumstances, cardio-pulmonary insufficiency, either pre-existing or due to shock, which will produce this kind of discrepancy. Again, what we like is to measure both blood volume and central venous pressure.

Here's the chest film of a patient showing the central catheter. If you're going to use central catheters, we'd advise you to use good-sized ones. They're not more dangerous than the little ones and they do better. This is a number 8 French cardiac catheter, it can be put in at the bedside in the brachial vein, just above the medial antecubital vein. One can feed this in and have the other end of the catheter attached to a vertical saline column. You can tell whether you're in the chest or not by respiratory waves and you can tell certainly when you get into the heart by a few arrhythmias that might develop. Then you pull back and leave this catheter in the superior vena cava and you can get along quite well with it. This man is in obvious congestive failure or pulmonary edema, in spite of the fact that his central venous pressure is normal at this point. And I bring that to your attention, because I recall his lungs were clear, we couldn't hear the rales. It was Dr. Weiss in 1941, talking at an academy meeting in New York, that first brought this to my attention. I don't know whether he deserves the first credit for it, but he talked about interstitial pulmonary edema, the kind that's there before you hear it. If you're aware of it then, you might be able to do something about it before the patient becomes so sick that you can't do anything about it. So, I recommend to you frequent portable chest films. They're not as good as the ones you get in the x-ray department, but they can tell you if you're starting to get the congestion of interstitial edema, before you can hear it with the stethoscope, and before the central venous pressure tells you so.

In this regard, you know there is a very strong element of the physiologic, and especially surgical, population nowadays that is saying to us, "The way to treat shock is to turn on the Ringer's lactate and just keep it pouring." This came out of Dallas originally. Dr. Shires is working with the cowboys down there, who, on Saturday nights are very vigorous with their knives and guns, and these are good strong healthy muscular people. Their cardio-pulmonary reserve is better than in Maine, or better than that of Boston, I think, especially in the population that we deal with. They tolerate an overload of fluid better than we do. It's better than that out in Da Nang right now. I've just come back from Washington where we heard reported that these young Marines, severely injured, are being treated this way, getting a lot of Ringer's lactate. The reason for doing it is that the clinicians out there at the bedside of the injured, who are treated immediately and beautifully, are finding that they are having less renal problems when they overhydrate with Ringer's lactate or any crystalloid solution. What they are seeing is this mysterious "wet lung" syndrome. To my mind, this just means overhydration, and it means that they're paying a price, because they are overdoing a good thing. I think we're going to discover over the next year or so that one must learn to turn off the crystalloid solution if one is to avoid this kind of picture.

If you plot central venous pressure and blood volume measurements on a graph, you come up with a curve that is not linear, because if it were, then you could measure either one and be okay. What this means is that the blood volume can be low, significantly low, with a normal central venous pressure, and yet the patient may swing suddenly to the other end of the scale, to a high central venous pressure, regardless of what the blood volume is. One can have a patient who has a high central venous pressure with a less-than-normal blood volume, or with a greater-than-normal blood volume. And you might say to me, "Why measure blood volume at all?" I would say, "Because the central venous pressure doesn't tell you, until it's very far down, that your patient is deficient in blood volume. If you want to keep him in best condition you had better measure this, keep him somewhere in the middle, so that he will have his best chance of fighting his total problem."

Hyponatremia in shock is something we, Smith, and Moore have commented about. It means that as you look at the serum sodium concentration in people who are seriously injured, you will discover that many of them (half of them in our series) will show a significant decrease in the serum sodium level, below 130 meq in half of our patients. What does that mean? Well, we're not sure, and that's where our present laboratory effort is going. We're trying to discover what that means. It could mean that the patient is overhydrated. This is what Moore thought originally, that the patients are getting too much water by vein, clinically, as a therapeutic agent. We are sure that this is not true in all of these

patients, because if you watch the water drop by drop, and make sure that they're not getting more water than you know about, they still develop a low sodium concentration. That brings up the question of internal shifts, either water out of injured cells, or movement of sodium into injured cells, "sodium pump" deficiencies, if you wish, so that they are unable to keep sodium outside the cell where it belongs. It is true, however, clinically, that if the sodium level is low, the patient's lungs are clear, the CVP is normal, and his chest film is normal, (clear of interstitial changes I've just talked about), that it will help such a patient to repair that level upward with the use of either isotonic or hypertonic saline, judiciously (meaning while you stay at the bedside). Let's hope the whole essence of my program is now plain, and that is for you to stay there and watch what happens. If you're going to treat with sodium chloride, don't order it for 6 hours and then come back 6 hours later and see how it's come along. Stay there and see how it goes, see the changes as the patient is receiving this, so that you can change your mind if you find you're not doing too well. What happens in many cases is, if you repair this sodium deficit the arterial pressure will go up and you'll need less or no pressor drugs.

We hate pressor drugs because we have learned in the laboratory that they have a synergistic activity with endotoxins. If you give endotoxins plus catecholamines, or adrenalin, or both, in sub-lethal doses together, you can produce beautiful lesions in the heart, kidneys and elsewhere, which may go on and kill. In fact, one of the major theses of our laboratory research is that perhaps catecholamines are stimulated, in other words, that the mechanism of death due to endotoxins may be very well due to stimulation of adrenergic nerves putting out catecholamines in the abdominal viscera, in the gut, affecting the arterial system, and affecting the permeability of small vessels in the portal area so that venous return has been hampered. If the patient has shock due to infection, you must primarily interest yourself in infection. Again, if he has an abscess somewhere, you must drain it, and if he has a hole in his intestine, you must repair it. You must do these things now, not tomorrow, because you can't get him out of shock first and then repair the hole, because you'll never get him out of shock. The old teaching to repair shock first and then go after the abscess or hole is, I think, fallacious, because you tend to fight a losing battle. You're better off to take the patient to the operating room with the appropriate fluids going, with the airway established, with the appropriate initial resuscitative measures underway, so that you can stop the continued onslaught of bacterial factors which will go on and kill him.

If the patient has septic fluid anywhere, from the peritoneum, from the wound, from the sputum, from the blood stream, you must have a very high index of suspicion and track all these things down. A patient may start off with peritonitis and some hours later, you'll discover that he's developing some trouble with his breathing, and then perhaps the next morning you'll discover that his urine has the same organism in it that the peritoneum had the night before. In other words, the bacterial resistance is lowered, and these people are a mark for infection in all organ systems. You must continue to pursue these infections and try to stay ahead of them. When we're dealing with peritonitis, we have discovered that gram stains are useful, so that one can have an early idea of what one is dealing with.

We are discovering that the synthetic penicillins are useful. Try to give antibiotics which do not damage the kidneys and do not damage the liver, if you can arrange it. The synthetic penicillins, thus far, can be used in almost any amount, without causing renal damage that we know of, and can give us reasonably broad spectrum control of gram negatives as well as gram positives. If we go to an agent like Kantrex® (kanamycin) for the klebsiella organism, we are apt to give it as a single dose, 0.5 gram, and then if the patient is anuric, wait until the urine flow returns before giving any more, because the blood level will stay up and if you give more, you may injure the kidney. We're using intraperitoneal solutions of antibiotics. Neomycin has been helpful to us. We think that it is useful to attack the organisms in the peritoneal cavity directly with catheter irrigations rather than relying on the intravenous alone. The flora can change. You may start with alkalogenes and proteus, and the next thing you know, the wound has different organisms.

Infection in our hands has not only been a hazard to the patient in shock, perhaps the primary factor in causing shock, but it has been a factor post-shock. We've pinned the gold star on ourselves on many occasions and said, "Well, the shock team has done a great job, the patient's no longer in shock, everything is fine, he can go back to the clinical services," and then discover two weeks later that he died. When you look at the chart carefully, and try to discover why he died, in many cases it was due to some trivial infection. In other words, the resistance to sepsis is so low, the patient has been so weakened by the whole experience, that an ordinary urinary infection, that you would treat on an ambulatory basis, might kill this man. I pass that along to you, to be aware of this in patients who have been critically ill.

To avoid extending my comments much longer, I'd like to just offer you a listing of some of the things we have found useful:

a. Respiratory control.

b. Volume replacement.

c. Vasopressor drugs – The trick with vasopressors is to fix everything else so that you don't need them anymore.

d. Saline.

e. Antibiotics.

f. Digitalis.

g. Coeliac block – We are interested in the visceral effect of bacterial toxins in terms of the adrenergic output affecting the viscera. This is a research subject

which, we think, pays rewards in the clinic or at the bedside. Extreme vasoconstriction affecting the gut, the spleen, the kidneys, and the liver can be overcome by the standard paravertebral block, using a long needle in the retroperitoneal space, with 0.25% Xylocaine,® approximately 40 cc. In many cases, we are favored by that therapy with the restoration of urine output, by increase in cardiac output, and by reduction of central venous pressure.

h. Cortical steroids – In the past year, and we've been at this now about 7 years, we have been impressed with the usefulness, as an anti-toxic agent, of massive doses of corticoids. Corticoids in massive amounts are useful in septic shock and should be offered. Which one you use is not as important as much as the amount you use, which should be massive. If we use something like dexamethasone, which is approximately 30 times the potency of compound F, we've been offering 40 milligrams, and then repeating it every four to six hours, which becomes a massive amount of corticoid therapy. We feel that the laboratory evidence is convincing, and my impression of our clinical evidence is convincing, that it helps a great deal to control the effects of toxins. If you're worried about the effect of corticoids on bacterial growth, you can forget it, as long as you also have appropriate antibiotics going in large amounts by vein. All the therapeutic agents that are given in shock should be given by vein, because the muscle flow is reduced, subcutaneous flow is reduced, so you don't know what kind of absorption you get from those other routes.

We've had problems. If you continue corticoids in massive amounts more than 48 hours, you'll be penalized occasionally. In over 60 cases that have received large amounts of corticoids, we've seen two patients who have bled massively, and we think this can be assigned to corticoid therapy. But in both those cases the corticoid therapy had been extended beyond the 48 hour limit, because the problem had extended, too, beyond that limit. In other words, if you can stop such therapy on the basis of the correction of the shock, and improvement of the patient, you should be able to cease the drug abruptly without fearing subsequent cortical suppression. You will not see massive hemorrhage or any hemorrhage from the gastrointestinal tract.

i. Body cooling – We use not as hypothermia, but just to reduce fever.

j. Peritoneal dialysis – We like to use this because we think we invented the process. We think it's a better way to control the potassium intoxication and acidosis that occurs in septic shock, or in any kind of shock, than other agents. Some agents will suppress respirations. Large amounts of bicarbonates with sodium attached may lead to pulmonary edema. Therefore, we think the best way to handle the acidosis and the fixed acids is to get rid of them. The best way to handle extra potassium is to get rid of it, take it away from the body. It does work, so try it. Commercial sets are now available. Put the catheters in early, it doesn't harm the patient. If the patient has peritonitis, it's not a contraindication. You can put the proper antibiotics in that fluid, and you will help to control peritonitis, not hinder it, while you're washing.

k. Necessary surgery – This has been discussed.

l. The most important one treatment is the subtle one, namely, we must have somebody who's going to just stick it out, and sweat it through, and once you've done enough of this sweating out, you get to hate the whole subject of shock, to hate the existence of it and what you learn, therefore, is to prevent it. The best treatment of shock is prevention, by far the best in terms of statistical opportunities to achieve good results, and it makes you a better doctor.

Cardiogenic Shock With Clinical Observations and Management

Dr. Paul M. Zoll:

Earlier you heard an explanation of the physiology and the mechanism by which shock develops and some of its consequences. Cardiogenic shock is a special type in which the shock results from disturbance in the function of the heart. In many ways cardiogenic shock is extremely difficult to treat, and in some types of cardiogenic shock the mortality is extremely high, higher than any other kind. We can divide cardiogenic shock into 2 or 3 types.

The first type from which the shock results is disturbances in cardiac rhythm. This is one of the simpler, more satisfactory forms to treat in which the results are correspondingly better. With disturbances in rhythm, we have extremely rapid rhythm, extremely slow rhythm, high degree A-V block, or even sinoatrial bradycardia, with a consequent reduction in cardiac output. At the extremes of rate, either very fast or very slow, the cardiac output can be greatly reduced, and as a result we may have circulatory collapse, shock, with diminished profusion.

The treatment of rapid rhythms, tachycardias, and fibrillations, is to very quickly control the rhythm. The treatment is to a large extent much more satisfactory than it used to be. I don't believe I need to go into great detail on the management of the arrhythmia itself, this is fairly well standardized now. There are electric measures available in which tachycardias may be terminated such as external electric counter-shock. Whether one uses alternating current or direct current, synchronized or not, really doesn't make very much difference. I think one should be confident that one should be able to terminate a rapid rhythm of any kind, with appropriate, properly-applied counter-shock in almost 100% of the instances. The termination of a tachycardia or fibrillation should be expected uniformly. That is not a problem anymore.

The problem is the recurrence of the arrhythmia, and this is a problem that is sometimes extremely difficult to manage, but its termination is really not so difficult.

In patients who are still conscious, one must pay for the counter-shock by putting the patient to sleep. One often requires anesthesia of slight or greater degree, and for the patient who is in shock, anesthesia is a considerable price to pay. Therefore, we don't always use counter-shock, even though we know that we can terminate the arrhythmia effectively with this electrical means.

I would like to emphasize that circulatory collapse, cardiogenic shock due to arrhythmia, is an emergency. It is not quite so desperate an emergency as cardiac arrest, in which effective circulation must be restored within 3 to 4 minutes or there is irreversible damage to the brain or heart. It isn't that kind of an emergency, but circulatory collapse due to arrhythmia or any other cause, is an extremely urgent matter, and one must restore effective perfusion of the brain, the heart, the kidneys, perhaps the liver, rather quickly. This is not a matter of thoughtful delay, one must act quickly, not so much to involve the matter of seconds to minutes, but certainly minutes to hours, so that one should make rapid decisions and proceed promptly with therapy.

Drug therapy of many types is appropriate in the treatment of arrhythmias with shock, and vasopressor agents are particularly useful with supraventricular arrhythmias, such as supraventricular tachycardia, especially if supraventricular tachycardia produces circulatory collapse. Then, very often the administration of a vasopressor agent will terminate the arrhythmia. An abrupt elevation of blood pressure by peripheral vasoconstriction not only counteracts the circulatory collapse, but very often terminates the arrhythmia. This is worth doing as one gets ready to do counter-shock, if that is planned as a second stage of therapy.

There is considerable interest presently, in the last year or two, in the management of cardiogenic shock resulting from slow ventricular rate; from high degree A-V block, second degree block or complete A-V block, and even sinus bradycardia with a slow ventricular rate in the 40's or 50's. This can produce circulatory collapse and evidences of inadequate perfusion of the various organs. Parenthetically, I think the simplest of working definitions and diagnoses of shock should be a drop in blood pressure with evidence of inadequate perfusion of vital organs; that is, the brain, the heart, the kidneys and most obviously, but not so vitally, the skin.

With this interest in slow heart rate, a great deal of work has taken place in the use of electric measures for accelerating the ventricular rate. I am speaking specifically about the introduction of a catheter electrode into a brachial or jugular vein, guiding it into the right ventricle, and thereby stimulating the heart through the endocardial surface to beat at a more rapid rate. This is an effective method of treatment and is widely used, particularly in coronary care units in some parts of the country, and particularly with slow ventricular rates in the presence of myocardial infarction. I believe that many times this is overtreatment, and carries with it considerable risk that can be avoided much of the time. The introduction of a catheter electrode into the right ventricle is not always as simple, quick, and effective as it might appear from some of the reports in the literature. If the patient is seriously ill, with acute myocardial infarction and circulatory collapse, the manipulation necessary, particularly with the removal of the patient to the x-ray department, is sometimes a considerable added stress that is really deleterious. Furthermore, the technique is not always completely successful; the control of cardiac rhythm is not always entirely effective; the catheter may not infrequently move from position and be intermittently ineffective, or become totally ineffective abruptly, without any obvious shift of the catheter where it emerges from the skin. There is considerable danger involved in the abrupt termination of effective stimulation of the heart in a patient with high degree A-V block. If one is driving the heart at 70 to 80 per minute electrically, and the electric stimuli suddenly becomes ineffective, there is a significant risk of abrupt ventricular standstill of prolonged duration. So, this is not a technique that is as safe as it has sometimes appeared in the literature. Furthermore, the introduction of a catheter into the right ventricle in patients with acute myocardial infarction carries with it considerably more risk than catheterization in people who do not have myocardial infarction. There is a considerable risk of ventricular irritability, the production of multifocal ventricular ectopic beats, and the production of ventricular tachycardia and ventricular fibrillations. I know of several instances of this sort which led to unfortunate, or perhaps unnecessary, loss of the patient. I would like to suggest, therefore, that we should not go immediately to the use of electrical stimulation in all patients with slow ventricular rate, whether or not there is heart block present, particularly in the presence of acute myocardial infarction. It has been our experience that most patients who develop A-V block in the presence of acute myocardial infarction can be managed satisfactorily without the use of this somewhat hazardous approach. I know it's old-fashioned and reactionary at the present in view of the general enthusiasm, but I think it is safer not to go immediately to this technique.

When we see A-V block appear, we monitor the patient continuously, so that we are aware of his rhythm from moment to moment. We have electrodes on the chest wall by which, in case of an emergency arrest, we may stimulate the heart immediately, and we have near at hand, and ready to be used, an external counter-shock defibrillator if ventricular fibrillation should appear rather than ventricular standstill. We have an intravenous infusion going with the availability immediately of sympathomimetic agents like isoproterenol, Isuprel® or epinephrine, by which the ventricular rate may be accelerated pharmacologically, and this is indeed a very effective means of accelerating the ventricular rate in patients with high degree A-V block, if it should get slow enough to cause trouble. We do not use the pharmacologic agents unless shock appears, or unless there

is syncope; in other words, we don't do anything to treat the A-V block unless there is an obvious clinical need. If there is a clinical need in the form of Stokes-Adams attack, or in the form of hypotension and the appearance of shock, we do treat it. We treat it with vasoconstrictor agents, we treat it with isoproterenol which accelerates the ventricular rate and may indeed improve A-V conduction. Furthermore, we make sure that the patient is well oxygenated, and drugs like morphine and Demerol® are given in as small amounts as possible.

One of the common causes of slow ventricular rate, partial A-V block, and marked sinus bradycardia, particularly in patients with acute myocardial infarction, is a strong vagal influence of a drug like morphine given for pain. It will very often slow the ventricular rate by its strong vagal effect, and with some anoxia in addition, this vagal effect may be quickly exaggerated. Such patients who develop sinus bradycardia in acute myocardial infarction, if the manifestation becomes significant, should be given oxygen, nasal oxygen or by mask, and should be given atropine intravenously. This will often terminate the problem and you don't have to do anything more.

When we find that patients have circulatory collapse, or cardiac syncope, that we cannot control with oxygen, a reduction of morphine, with atropine, with isoproterenol or epinephrine, we then certainly are perfectly willing to use catheter electrodes. However, we find that we need them in an extremely small proportion of cases. A recent suggestion and recommendation was that all patients with myocardial infarction who have any degree of A-V block, even all patients with inferior wall myocardial infarction in whom A-V block may be considered to be more likely than those with anterior wall myocardial infarction, that all such patients should have a catheter electrode in place. I consider this to be rather excessive, somewhat misguided, and carry considerable risk with it. I really believe that it should not be used.

The second major kind of cardiogenic shock involves a large category in which shock results from diminished cardiac output, diminished contractility, or diminished contraction of the heart for one reason or another. One group in this second category are patients with mechanical difficulty with cardiac output, mechanical obstruction. This occurs in patients with mitral stenosis and atrial fibrillation in which the atrial fibrillation is so rapid that cardiac output is diminished. This may lead to circulatory collapse and a shock of a rather severe nature. The treatment is fairly obvious; one manages the rapid ventricular rate by prompt intravenous administration of rapidly acting digitalis glycoside, so that the degree of A-V conduction is reduced and ventricular rate is slowed. This is a most gratifying manifestation of the action of digitalis, its time-honored best effect.

Other mechanical problems occur much less often, but interfere with cardiac output and may lead abruptly to syncope or somewhat slower circulatory collapse and shock. These include ball-valve thrombus obstructing the mitral ring, and aortic stenosis with such marked narrowing that the cardiac output is diminished, and with one minor hemodynamic change or another, there may be sudden appearance of circulatory collapse. The mechanism of syncope is not always clear because it's so difficult to document in this kind of an emergency situation. Occasionally, aortic stenosis produces syncope by the mechanism of ventricular fibrillation. Some instances of ventricular standstill have been observed, and sometimes cardiac syncope or circulatory collapse of an abrupt nature may appear in aortic stenosis without any change in rhythm, but simply by the abrupt reduction in cardiac output in the presence of exercise or increased effort.

Cardiac tamponade is another mechanical difficulty that may obstruct cardiac output and lead to cardiogenic shock. This may result from a pericarditis with effusion or other types of pericarditis that occur. This also results from pericardial hemorrhage with tamponade as it appears in acute myocardial infarction, particularly when anticoagulant therapy has been given. These mechanical problems are rather infrequent. We should keep them in mind for the rare case that may occur.

Myocardial weakness itself is a major cause of cardiogenic shock. A relatively infrequent type of myocardial weakness appears with myocarditis – acute myocarditis of an infectious or alcoholic nature, and perhaps, most often, of an idiopathic origin. In this relatively infrequent disease, the most common cause is not known. We have what appears to be a non-specific myocardial inflammatory reaction for which no explanation can be found. It can be extremely severe, and may lead to such marked reduction in cardiac output that patient may die of cardiogenic shock. Treatment is often unsatisfactory in that digitalis and other agents don't work very well. Occasionally, particularly in the idiopathic variety, steroids in large doses seem to be very effective. This is one area in which steroids should be used vigorously, and with some hope of success.

The major subject on which I should focus is cardiogenic shock due to acute myocardial infarction. This is the most common type of cardiogenic shock and one in which the mortality rate is extremely high, perhaps in the order of 70% to 90%. Even though we have learned a great deal about cardiogenic shock due to acute myocardial infarction, our results still are not very good. Sometimes in acute myocardial infarction the shock is due to some special kind of problem such as: rupture or dysfunction of a papillary muscle, a rupture or tear of an aortic or mitral valve cusp, a sudden rupture of the interventricular septum, the free wall of the left ventricle suddenly ballooning (aneurysm formation), or a complication of acute myocardial infarction, e.g., pulmonary embolus. These are not the major causes of myocardial weakness that produce cardiogenic shock. The most common mechanism, and the major one that we deal with, is simply extensive myocardial weakness due to an excessive infarction necrosis of muscle, and this is the problem that we have to face.

This problem is sometimes aggravated by therapy, by the administration of drugs that may reduce myocardial contractility or increase vasodilatation, so that the blood pressure disappears. I am particularly referring to patients with acute myocardial infarction who have been treated in the past with drugs for blood pressure, with drugs for congestive failure such as diuretic agents, and also patients with acute myocardial infarction who were given tranquilizers. These agents, in particular, are likely to aggravate circulatory collapse and lead to cardiogenic shock. The combination, for example, of tranquilizing agents like Thorazine® or Compazine® with an analgesic like morphine or Demerol, can lead to circulatory collapse. It is not infrequent to see patients with acute myocardial infarction, who were given morphine for the pain, develop a little anoxia because of suppression of respiration, become somewhat nauseated, then given something like Compazine to counteract the nausea, and then go into circulatory collapse. This is not infrequent and one should recognize the likelihood of this possibility. The treatment here is the omission of the analgesic agent, the use of oxygen by mask, and the administration of a peripheral vasoconstrictor agent such as norepinephrine. This kind of a problem is not difficult to treat because there is an obvious simple cause that is remediable. Other kinds of drugs that I should also mention are digitalis, quinidine, and procainamide, which may produce arrhythmia and peripheral vasodilatation, or diminish cardiac contractility.

The primary problem, however, is when the infarction is extensive enough so there isn't enough heart muscle remaining to produce adequate contraction and, therefore, there is a loss of stroke output. The cardiac rate usually rises, but does not give enough of a cardiac output to perfuse the tissues sufficiently. Very often in cardiogenic shock of this sort there is some degree of peripheral vasoconstriction, so that the skin is usually cold, clammy, and wet, and this is a very important observation to make. Occasionally, peripheral vasoconstriction does not take place, the hands and feet may be warm and moist rather than cold and moist. In this case, it is clear that a vasoconstrictor agent should be given promptly without much concern.

I said earlier that the treatment of cardiogenic shock should be regarded as an urgent, if not an emergency, problem. Even minutes count in this kind of circumstance because, as Dr. Frank pointed out earlier, there is a vicious circle involved, in that with reduction of the perfusing pressure below critical levels, there is poor perfusion of the myocardium, extension of the area of infarction, and further loss of contractility. There may be the production of thrombi in narrow, tortuous coronary vessels. Multiple thromboses have been observed with consequent marked extension of the thrombi. I think the primary consideration in any case of shock, particularly involving the heart, particularly when we know that heart disease is present, is that the pressure perfusing the coronary arteries must be maintained at all costs. Despite the risks involved in what you do, if you can increase the perfusing pressure so that coronary blood flow is better and myocardial oxygenation is improved, you have made a significant improvement. Unfortunately, if one needs to continue vasoconstrictor agents for too long, one may have difficulties with reduced renal blood flow, damage to the gastrointestinal mucosa, etc. But, if you don't use vasoconstrictor agents if the myocardial perfusion is not adequate, the patient will die anyhow. There has been a great difference of opinion in this area of whether or not to give vasoconstrictor agents in shock, particularly in acute myocardial infarction. There are points made on both sides. It seems to me that the over-riding consideration is the maintenance of adequate blood flow through the coronary system, and we have to do this no matter what else. One should start as soon as possible, because to prolong vasoconstriction does produce difficulties with other organs, particularly the kidney and liver, if one continues it for too long a period of time.

Therefore, the primary approach in therapy of cardiogenic shock, after these special circumstances I've described, is to increase peripheral vasoconstriction and raise the blood pressure by giving a vasoconstrictive agent. Most certainly give this agent if the skin is warm and moist, and even if it is cold and clammy, because in spite of this evidence of vasoconstriction in skin, there is reason to believe, or at least hope, that peripheral vasoconstriction is not complete. So, if you increase it somewhat with a vasoconstrictor agent, you may improve coronary blood flow which is the primary consideration. Such vasoconstrictive agents, particularly norepinephrine intravenously, or other things like epinephrine or methoxamine, increase peripheral vasoconstriction, increase peripheral vascular resistance, raise the blood pressure, and shunt the blood to the vital centers, the heart and the brain. If continued for too long, they may reduce renal flow in a serious way that may kill the patient, but at least you have a fighting chance then, and you meet that problem later; whereas, if you don't meet it immediately you don't have the second problem. Some of these agents will also produce constriction of the venous capillary bed, which is useful much of the time in that it increases venous return to the right side of the heart and improves cardiac tone, in that way improving cardiac contractility. However, this approach is not always successful, indeed, frequently not successful at all, and one looks for other approaches.

One would like a method of increasing contractility by improving the contraction of the remaining heart muscle. The major agent that we have available and is appropriate is digitalis. I believe that in cardiogenic shock, even in the absence of congestive heart failure as measured by any technique, even in the absence of venous distension, increased central venous pressure, or pulmonary congestion, circulatory collapse itself is an indication for the administration of a rapidly acting

digitalis agent. It will often improve cardiac contractility, and even a moderate improvement in cardiac contractility may be lifesaving in this instance. One must realize that the administration of a potent agent like digitalis in this circumstance is a risk; you are taking chances. To buy this probable moderate benefit you must take the chance. You may produce arrhythmia and, therefore, one must give it carefully, under continuous observation. Use a rapidly acting agent so that the effect is obtained quickly, and so that you will know if you are getting enough of an effect. If you don't get any effect, you may give more; if you get an effect, you stop right there, assess the effect; if it's sufficient, you may be satisfied; if it's not sufficient, you'll need to decide then if you should continue.

This points to rapidly acting drugs, so that you can observe the effect rather soon, and this point is extremely important in this entire area. I think I can't do anything better than to reaffirm what Dr. Howard Frank said, it requires a physician to make continuous observation of the patient under these circumstances in order to do the right thing and to do it well. Therefore, the way that a doctor can be effective in this circumstance is to use a drug that works quickly, so that he can tell rather quickly whether it's doing what he wants, whether it's not doing enough, or whether it's doing too much, and thereby adjust his therapy from moment to moment. Moment-to-moment control of cardiac functions is an extremely important idea to keep in mind with the administration of these drugs, not only digitalis glycoside intravenously, but also with the intravenous use of drugs like isoproterenol, norepinephrine and epinephrine, even in dilute solution. These drugs have an immediate effect on cardiac function, one can observe their action within seconds to minutes. If the effect is satisfactory, one keeps the drug going at that particular rate of infusion; if not enough, you give more. If you get an untoward effect, you stop, or reduce the rate, and the untoward effect is likely to subside within minutes. So this is why this kind of drug therapy is so effective, because you have control over it from moment to moment, and also relatively safe, even though these drugs are extremely potent.

One gives, for example, isoproterenol intravenously to increase the cardiac rate in the presence of high degree A-V block or sinus bradycardia, and also to increase myocardial contractility. I would first, in most circumstances, give digitalis glycoside if I wished to improve cardiac contractility, and then if it fails, to give isoproterenol intravenously in dilute solution. If there is a suggestion that peripheral vasoconstriction is not complete, I would not use isoproterenol, or I would not use it alone, because isoproterenol has a positive effect on contractility; it has a positive effect on cardiac rhythm and rate; but it has no peripheral vasoconstrictor effect. In circumstances where I wish to have vasoconstrictive effect, I would add norepinephrine which has a significant peripheral vasoconstrictive effect, and some chronotropic effect. Sometimes, even in the presence of acute myocardial infarction, one might wish to use epinephrine intravenously in dilute solution. It has both effects mentioned. Most of the time, it is better to give both isoproterenol and norepinephrine together, so that one can juggle the amount of each to fit precisely the situation at hand. Since these drugs are so rapidly acting, and their effects appear so quickly and disappear so quickly, one can give them with relative safety in this kind of circumstance.

There have been recent suggestions that corticosteroids in massive doses will improve cardiogenic shock and cut the mortality in half. I know that steroids in moderate doses, such as we used in the past in the hope of improving the efficacy or method of action of the catecholamine, at this dosage level are not particularly useful. I have no personal experience with steroids in massive doses in this kind of circumstance. The mechanism by which this is supposed to work has not been suggested by anybody in a reasonable way as yet. I think we simply must have an open mind on this point.

Finally, a number of mechanical aids to circulation have enjoyed considerable prominence recently. You will find application for them in a circumstance where there is extensive loss of myocardial contractility, much of which one would hope would be temporary, so that if a patient could be kept alive, considerable heart muscle, which is not functioning well or contracting poorly because of ischemia, might recover and the patient might be saved. In this kind of circumstance, it might be well if we did have some temporary means of improving cardiac contractility, or increasing cardiac output, or increasing circulation of oxygen in the blood. These suggested techniques have included the hypobaric chamber, cardiac by-pass, and counter pulsations. All these techniques, so far at least, do not have a place in general clinical medicine. I am not really aware of any clear demonstration that any of these is really successful, even under clinical experimental conditions. We would hope that in the future some such technique might become useful, but at the present time, I think we simply cannot consider using them ourselves, clinically. We must wait for the special centers to gain enough experience to present a hopeful, new approach to this still very difficult problem.

Question – Answer Period

Q. What rapid digitalis preparations do you use, in what dosage initially and later, what effect do you seek, and how do you use digitalis in the presence of third degree A-V block?

Dr. Zoll:

For the emergency administration of digitalis intravenously, I ordinarily use either Digoxin or lanatoside-C. It seems that in our hospital we have Digoxin generally available, so that in the last couple of years, we have used this almost exclusively. For a patient of average, or slightly less than average size, if he has not received

Continued on Page 205



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Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching.

The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. *2*:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. *2*:199-205 (April 27) 1968.

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any digitalis before, I would give usually 0.25 to 0.50 milligrams intravenously promptly, and would expect some effect within 20-30 minutes. Certainly a full effect is obtained within an hour, so if one is in a great hurry for an effect, and nothing happens in an hour, another dose of perhaps 0.25 might be given after that time. Thereafter, either the same dose or half that amount, 0.25 mgm. or 0.125 mgm., might be given at intervals of 1 to 4 hours, depending on the urgency of the situation. One asks what kind of effect you look for. You look for an improvement in cardiac output, basically, unless there is an arrhythmia, in which case the effect is very obvious – an improvement in the arrhythmia you are trying to treat or the appearance of ectopic activity that was not there before – which means that there is present a toxic effect or other side effects of toxicity, particularly nausea or vomiting. If none of these effects occur, and you're still looking for improvements, then one has no way to decide when to stop giving the drug. One simply gives what one considers to be a reasonable amount, and stops when the amount gets a little excessive. This is purely clinical judgment that is not entirely satisfactory all the time, and there are occasions when one runs into really serious difficulty with digitalis no matter how administered, no matter how carefully; one must accept digitalis toxicity. Therefore, one gives it only for adequate clinical motivations and you must take chances with it when your indications seem appropriate.

When A-V block is present in a high degree, I prefer not to use digitalis in any form at all, if at all possible. I believe that digitalis is basically unsafe. In high degree A-V block, digitalis may increase the block to a complete block, but that's not the real problem. It doesn't matter if the complete block is present or only second degree A-V block. The problem is that digitalis may make ventricular rhythmicity grossly unreliable. I have seen several patients develop Stokes-Adams seizures when they were digitalized and not at any other time. However, if other measures fail and you need digitalis, or you think you need digitalis, because of severe congestive failure or inadequate contractility, then one goes ahead and uses it despite the contraindication. This becomes, therefore, not an absolute contraindication, but a relative contraindication. When one does use digitalis in high degree A-V block, one should use it perhaps in smaller doses, more cautiously, and with a rapidly acting agent, so that if one does run into toxicity or trouble, it hopefully will not last as long as with the long-acting agent.

Q. How do you utilize urinary output in your patient management, as one would in handling a burn?

Dr. E. Frank:

Urine output is a good guide and in shock we have routinely accepted the risk of a catheter in the bladder and monitor of the urine output hourly, regardless of the kind of shock we have been dealing with. An adequate urine output is very reassuring in terms of the amount of visceral blood flow. Outputs in the range of 30 to 50 cc. per hour are very gratifying. Sometimes you won't get them, and of course if you try to achieve such outputs by forcing fluids, you may often get something you don't want; namely, pulmonary edema. So, you need to have some idea of what is the capacity of the heart to put out what you're offering. You need to have some idea of what the replaced volume is, the clinical knowledge of the losses, and the responses of the patient to replacement.

Did you mention burns specifically, or are you mentioning burns as just a general situation in which there is blood volume deficiency? I don't know why burns should be any different. There's been a lot of magic about burns, a lot of formulations coming out of Virginia and elsewhere showing that you should figure the amount of burn surface and calculate the amount of fluid you should give. We feel now that the best way to handle fluid replacement is essentially in line with what I've told you; mainly, measure the volume. The hematocrit will mislead you beautifully in burns. The hematocrit may be quite high. It is normal or above normal in someone who is severely hypovolemic due to a burn, or due to peritonitis. These are obvious examples in plasma volume deficiency. Whole blood volume deficiency also cannot be monitored by the hematocrit. You must monitor these things by measuring deficits, measuring responses in terms of central venous pressure, and measuring responses to whatever therapy you're giving.

Dr. H. Frank:

I would like to build on that in connection with general surgery, in any procedure in which there is a considerable degree of dissection. There will be a plasma loss in the area of dissection, and the postoperative hematocrit is likely to be normal or higher than normal, in consequence of this plasma loss. In spite of all we know, there is a certain reassurance that sometimes occurs when someone postoperatively sees that the hematocrit is normal or high. We must remind ourselves that these are concentration values, and not volume measures, and that a patient who has had any kind of extensive operation with dissection – a gastrectomy, an abdominal-perineal resection, or whatever – will have had a very considerable hidden plasma loss into the tissues. A high hematocrit value is very likely to mean a low overall blood volume.

The other point in connection with this, the central venous pressure, is, of course, influenced by a number of factors apart from the blood volume, so it is not a perfect measure of blood volume, even in terms of colloidal solution. It is particularly unreliable with regard to crystalloidal solution, so that when large volumes of Ringer's lactate are put intravenously, these are expanding the total extracellular fluid, and the effect upon

central venous pressure may be small, although there is a very large increment in extra vascular volume. Therefore, the monitoring of crystalloids solution by central venous pressure is an unsatisfactory way of keeping out of trouble.

Q. In measuring blood volume, what do you use, and how often can it be done?

Dr. H. Frank:

We have used iodinated serum albumin, so-called Risa. With the apparatus that has been available to us, we have found that we can get valid measurements as often as every two hours if we need them. Granted, the background rises, and the margin or error increases as the background gets higher, but the variation in results is not great. There are not many patients in whom you need to do this, but there have been several in whom it has been very helpful for us to know every 2 or 3 hours what the blood volume was doing.

Q. You said you used a digitalis preparation which had an effect in 30 minutes. Is this desirable, what about ouabaine and strophanthin which act in 10 minutes?

Dr. Zoll:

It is true that ouabaine is a very useful glycoside. We don't use it anymore, because it deteriorates when kept in the ampule for any length of time, for a year or so. I think that Digoxin, for example, remains potent for longer periods of time, and there has been some variation in the effectiveness of ouabaine as noted in our pharmacy from time to time. It is for this reason that we do not use it anymore. It does have other excellent characteristics in that it is totally excreted within 24 hours. One doesn't have the problem of calculating how much you've given, and how much you should give, the next day for maintenance. You just start every day with a fresh digitalizing dose. It it true that strophanthicide has a slightly more rapid onset of action and full effect than does ouabaine. I said a half-hour for Digoxin. One can see the effect of Digoxin within 15 or 20 minutes, and in most circumstances this is fast enough. We don't use the stophanthins ordinarily because, although they are extremely rapid in their action, they are rapid in their excretion, and don't really last long enough to give one a continued effect until the next day. It's really a matter of experience, and if you have good experience with ouabaine or strophanthicides of one sort or another, by all means continue to use them.

Q. At what level do you consider hypotension significant in myocardial infarction, and what do you do about it?

Dr. Zoll:

The level of drop in blood pressure depends to a large extent on the previous level of that patient. If the patient has not had hypertension in the past, usually a systolic pressure of 90 millimeters, certainly 80 millimeters is very worrisome. I would almost always make an effort to raise the blood pressure if it drops to 80, and most of the time if it drops to 90. One usually looks for signs of inadequate tissue perfusion of the kind that is so readily apparent at the bedside, that Dr. Edward Frank detailed. These are very useful things: the cold clammy skin, the clouded sensorium, the reduction in urinary output, the presence of persisting or recurring cardiac pain. Any of these indicate poor perfusion, and is justification for making effort in increasing perfusion. If the patient has had hypertension in the past, he may show clinical shock, that is, a considerable drop in blood pressure, and signs of poor tissue perfusion with systolic pressures even a high as 120 or 130. Therefore, in some circumstances one may be justified in treating for cardiogenic shock with pressures of 120-130.

Dr. E. Frank:

If you watch this along with an oscilloscope at the bedside, you can find some very tricky things going on. You can discover what this lower table level is, this pressure which the patient will tolerate well in terms of cardiac function, in terms of reduction in arrhythmia, in terms of reduction in conduction defects, and even in terms of sagging S-T waves or inverted T-waves, or whatever that might encourage you to believe that he had been living with ischemic phenomenon before you slowly or gradually raised his pressure 10, 15, or 20 millimeters with a vasoconstrictor agent. If you push him a little too high, you get into problems again, sort of like digitalis. If you push him 20 or 30 millimeters, in other words, if you push him back to what you considered to be his normal before, that may be a serious mistake, too. Then you start getting into the side effects of the agents, such as noradrenalin which has a remarkable series of phenomenon in the EKG, which are unadvisable and undesirable, and of course, this also adds to cardiac work. As soon as you raise the pressure beyond the level the patient needs for that moment in his life, you're asking the heart to work harder. Obviously cardiac work does relate to pressure, and the higher it is, the more the work. I'd like to ask Dr. Zoll what he thinks about current notions of cardiac rate in terms of work. I think we are led to believe from some of the physiology that's been turned out lately, that heart rate increases also increase cardiac work. Is that true, or are there modifications to be considered?

Dr. Zoll:

The heart rate has a direct relation to cardiac work certainly, and therefore, too, oxygen demand. If the oxygen supply to the heart is limited, certainly excessive cardiac work and oxygen demand is deleterious. One should demand of the heart as little as you can get away with, that is, as soon as you see good perfusion of the critical tissues that's where you should stop. It seems clear, particularly from some of the observations we have made, and many others have made, that the cardiac out-

put increases fairly proportionately with the cardiac rate, reaches a summit with cardiac ventricular rates between 70 to 100 beats per minute. Then, as the ventricular rate goes above 90-100-110 per minutes, the cardiac output diminishes somewhat, but the cardiac work continues to increase. Ordinarily, one should be happy with a ventricular rate somewhat between 80 and 100 per minute, and be concerned if it goes much faster than that.

Dr. E. Frank:

The question of rate has led us to be a little cautious about isoproterenol, which has a very significant effect on rate. If you start with a patient in shock, who has a rapid rate to begin with, sometimes we feel that this is in itself a contraindication to the use of isoproterenol, because further increases in rate may actually reduce cardiac output. We have monitored that with direct measurements and found that what you have just heard is indeed so. The rate goes up, the output falls, and cardiac work is increasing in line with data previously mentioned so I think that this is risky and not desirable.

Dr. Zoll:

In this regard I would like to mention one other caution with the use of sympathomimetic amines, and particularly with the use of isoproterenol. Most of the sympathomimetic amines that we use have an effect on cardiac rhythmicity and will have a positive chronatropic effect, that is, they will increase the sino-atrial rate of the normal pacemaker, and will increase the ventricular rate. Everybody recognized this to be true of isoproterenol and epinephrine. It is also true of norepinephrine, and one can accelerate ventricular rate with norepinephrine, as well as with isoproterenol. This is not always recognized because ordinarily the vasopressor effect of norepinephrine is sufficient to give you a vagal reflex that will slow the sino-atrial rate. However, along with this positive chronatropic effect, there is a stimulation of ectopic foci, a real risk of producing cardiac arrhythmia, ectopic ventricular arrhythmia in particular, ventricular tachycardia, and ventricular fibrillation, not only with epinephrine which everybody accepts, but also with norepinephrine and with isoproterenol. There has been a misconception or misstatement in several papers in the literature that isoproterenol produces less cardiac irritability, and is less likely to produce ventricular tachycardia and fibrillation than does epinephrine. I believe this not to be true. If one uses any of these agents, one must realize that there is a risk of not only accelerating the ventricular rate, producing sinus tachycardia, but of producing ectopic serious ventricular arrhythmias, ventricular tachycardia and fibrillation.

Dr. H. Frank:

In relation to norepinephrine therapy in a patient whose shock is due to hypovolemia, note the caution that Dr. Edward Frank gave earlier. You may find it necessary to use vasopressor therapy. These flat remarks that one reads, that "pressor therapy should never be used," or "antipressor therapy should be used," are not likely to tell the whole truth. There will be instances in shock due to hypovolemia in which you decide that you need to use at this moment a pressor agent. Your object, however, is to get to the root of the matter, and the psychological danger of the pressor agent, of course, is that the chart looks better, and the people who are around the bedside looking at the blood pressure chart are less alarmed. They have no right to be less alarmed because the blood pressure is better, but not for the healthiest of reasons. We see this in the operating room sometimes. You can ask the anesthetist what the blood pressure is, and he'll tell you some number that sounds good. Sometimes he will qualify it with the statement that it was because he gave a pressor agent to restore it to that level. Also, there is the physiologic effect of the long term use of a drug like norepinephrine, which interferes with the recruitment of plasma fluid from the extracellular fluid, and in the long term, actually drives plasma volume down, increasing loss of fluid through capillaries. This is another component of pressor therapy that has to be kept in mind.

Q. A couple of statements about the relationship of circulation in the lower extremities:
   1) In surgery the patient is in a jackknife position and we had significant loss of blood pressure just from being in that position while under anesthesia.
   2) The classic teaching of what to do when a patient is in shock is to put him in Trendelenburg position, and later information says, no don't do that, just elevate the lower extremities. Would you comment on those?

Dr. H. Frank:

The effect of many pharmocologic agents in this regard is to reduce venous tone. The loss of venous tone may not be evident when we are in the horizontal position. However, when the trunk or the rest of us becomes vertical, the lack of venous tone becomes manifest in an abrupt reduction in venous return to the heart, and so then we have all the train of events that we've been talking about. Blood accumulates in the veins. I remember a lady who was recovering beautifully from an appendectomy for ruptured appendix, and one of the house staff, out of kindness, gave her a drug which was an antiemetic, because she had mild nausea. She would have been much better off to have been allowed to live through her nausea, because the next time she got out of bed, her blood pressure dropped, she fainted, and when she was brought to the bed she had a myocardial infarction, "out of kindness." So this is part of what your getting to.

The other part of it is, can you mobilize this fluid in the lower extremities to be useful, and that's what this postural change is, the old recommendation of a Trendelenburg position to try to empty the veins towards

the heart, and to the extent that you can get an abrupt change. People have used this, incidentally, as a functional test of how bad is the hypovolemia, because if you can improve things posturally, maybe its only marginal, or if postural change doesn't do anything, obviously it's more severe. It's clearly limited, and in my own view, it is outweighed by the disadvantages of the Trendelenburg position on respiration. I would much rather give the patient a transfusion to restore blood volume.

Dr. E. Frank:

If you put a patient in position with his head down, this might be lifesaving and momentarily useful when he has no blood pressure. This way you can accomplish some increase in venous return rather acutely without waiting for the blood bank to get to you, just by lifting his feet up off the bed. There are several hundred cc's of blood in the legs, in the veins, and if you lift his feet without turning the whole body upside down, you may get the effect of a rapid transfusion from the legs into the central circulation, supporting the heart, coronaries, and brain for those minutes of time until you can get something up and out of the bag. Some of our surgical colleagues in England tell us that this is a routine position in some of the major teaching hospitals in London and elsewhere. The patient is kept with his feet up. The body is horizontal but the legs are elevated to keep them empty. I think they also have the notion this may minimize thrombophlebitis and thrombosis in the lower extremities. I think the big hazard to putting the patient in an upside-down position, namely, head down, is what you have just heard about respiration. As soon as you do that, the abdominal content is thrown up against the diaphragm, and ventilation fails. This is a great hazard to ventilation as soon as you put that extra burden on the respiratory apparatus, and we have had plenty of documentation of that in terms of lowering of arterial oxygen saturation, etc.

Q. Please comment on Dibenzyline and its use in shock.

Dr. H. Frank:

We claim some priority in the use of adrenergic blocking agents as prophylaxis against certain types of experimental shock. The idea is to insist upon flow to the viscera, the abdominal viscera, the hidden areas of the body, those areas which generate the toxins which I spoke of earlier, and which will kill in the long run if the patient doesn't die first. If you use Dibenzyline, which is a generalized adrenergic blocking agent, you must be prepared to accept the effect of that which will be an increased visceral flow. You must be prepared to meet a fall in systemic arterial pressure. Those who use these drugs know that before they give the drug Dibenzyline, usually in the dose of 1 milligram per kilo, usually given intravenously for over an hour; they must be prepared to fill the expanded vascular tree which is going to dilate on the basis of adrenergic blockage. Dr. Nickerson of Montreal does this, and says he can get away with it because he's giving blood volume to fill the expanded tree, and at the same time he gains from this increased visceral flow, which then permits better urine output and better function of liver, etc. Some of us haven't had as much experience as he has with it. It's hazardous. We tried it a few times and it's very tricky. If you were doing it with somebody whose pressure is quite low to begin with, you may have momentary severe hypotension which you will have a difficult time controlling, and during that moment you may have a lethal cerebral or myocardial catastrophe. He says this is rare in his hands, and I must say that one of my purposes in life is to get up to Montreal and see just how he handles this drug personally with his clinical team. Nickerson, himself, is basically a pharmacologist, and I don't know how much personal control or personal contact he has had with patients. He has good clinical team working with him. I advise you to watch out for the drug when it comes on the market. I understand it's coming out pretty soon. It is a dangerous drug for this reason, you must handle it with due care. A fellow like Lillehei is using Dibenzyline and at the same time is giving Aramine, a vasoconstrictor agent. It's sort of some of each, and it's hard to know what you're doing. Are you blocking or are you not? When I speak to him about it he says, "Well, we are dilating where we want to dilate, we're blocking where we want to block, and we are constricting where we want to constrict." This is beyond me. I'm not being critical, I really am not. I'm just saying watch out, and you've got to know what you're doing with these agents as they are very potent and fraught with danger. As Dr. Zoll told you, whatever you do, make sure you understand what the effect of the drug you have in hand is going to be. Nickerson says he can tell when a patient is hypovolemic very easily. All he has to do is give the patient some Dibenzyline, and take the patient's pressure; if it falls through the floor, then he knows the patient is hypovolemic and he gives blood or plasma. I say that in this moment when he is making up his mind the patient may suffer this catastrophic event. He says it doesn't happen often in his experience. I don't know how often is "often," and what kind of patients he is dealing with in pre-existing coronary or cerebral arterial disease. We have a lot of that in elderly folk who can't tolerate too much hypotension for too long a period of time. The theory is good, and it works nicely prophylactically in animals, but we're just not prepared to say how far to go with this at the clinical level.

Q. Comment about low molecular Dextran and its use in shock.

Dr. E. Frank:

I presume you mean Dextran 30,000 to 40,000. Dextran started as a plasma volume expander during WW II when the Europeans did not have what we have, namely lyophilized dried plasma. They had to do something

else and they gave Dextran, because it could stay in the plasma space and vascular tree, and, indeed, it worked out well. Then they discovered if they gave more than a quart of this agent, that they were seeing oozing and bleeding tendencies. Why this occurred was not clear at first, and it's still not too clear. The National Research Council has spent 20 years studying these oozing tendencies following large doses of Dextran. A group in Stockholm has done the same. The vast evidence so far is that much of the effect is due to dilution. If you give more than a liter, you are diluting out all of the clotting factors to an extent where the combined effect is that of a minor or major bleeding tendency. Dextran has a lot of other effects which seem advantageous. Dextran is an electrically charged substance, and it coats particular items in the blood stream, such as platelets, red cells, and the endothelium, so that if you coat all of these particles, red cells and platelets, with a negative charge, obviously they will repel each other and, therefore, sludging will be reduced. In the small vessels one will have less interference with the flow due to the fact that these particles will repel each other and move more rapidly through the small vessels. There is also evidence that the viscosity of blood is reduced by low molecular weight Dextran. If you are dealing with situations of low flow in which clotting is a factor, a possible hazard or complication of low flow, it would seem that Dextran might have a part to play in therapy. We personally haven't been making too much use of it, maybe we should. The very low molecular Dextran 30,000 to 40,000 hasn't been easily available. The 70,000 Dextran is widely available. It has mixed effects, some of it sticks around for quite a while if you give more than a liter of it. We've been using Dextran in our emergency ward to save the day, so to speak, until blood comes along, or plasma, albumin, or some other agents which we feel are better for restoration of plasma volume. Some of these other physiologic effects may be of interest, the small vessels sludging, especially. Dr. Hardaway at Walter Reed has been very much interested in preventing microemboli and microthrombi in shock. He has had a theory going for sometime that hypercoagulability is one of the common results of shock, or low flow state, especially in dogs, and that is one way of treating shock. He offered us a treatment using Heparin in dogs. He thinks Heparin helps the dog in shock. We find that there are so many hemorrhagic phenomena going on in the gut of the animal in shock that perhaps the risk is not worth taking. Certainly, postoperatively we wouldn't use an agent which might increase bleeding, and I don't know how Dr. Zoll would feel about it in a myocardial infarct patient in whom there might be some opportunity to overload the lungs or possibly increase bleeding tendencies, or in someone with a serious myocardial injury where there might be some pericardial bleeding. So far, there hasn't been too much validity for it at the clinical level except for the acute early use in small volume.

Dr. Zoll:

There was a meeting last spring in Stockholm on the small molecular weight Dextran in which there were several instances described where there were renal problems in relation to the 30,000 or 40,000 molecular weight Dextran. Apparently it comes out very quickly, it's so small that it quickly comes through in the urine, and it has effects on the tubules due to the marked osmotic action there. This can be a warning if you are going to use it.

Q. Dr. Zoll, have you had any experience with this new anti-arrhythmic drug, Inderal?

Dr. Zoll:

Inderal, or propanolol, is a beta-adrenergic blocking agent and should prevent the positive chronatropic action of endogenous epinephrine. It has been suggested as being useful in the prevention of cardiac arrhythmia. We have used it to some degree and not found it very helpful. The problem of prevention of recurring arrhythmia is still a very difficult one. As I said earlier, we can terminate any arrhythmia that is present as an acute process almost every time, but we have a great deal of trouble medicating to prevent its recurrence, both when the arrhythmia is extremely serious, and when it is merely a nuisance. There are many drugs available for this purpose. The most effective ones are quinidine and procainamide for the long term. Inderal is largely ineffective. There is an occasional patient in whom it seems to make a difference, but in our hands, it is not very successful.

Q. The majority of us here, or in this state, practice without rapid and accurate blood volume determinations. What can we do about that?

Dr. H. Frank:

I think that in most instances your clinical indices will guide your management of the patient. I think the great usefulness of the blood volume determinations has been to give a quantitative reinforcement to these clinical indices. If the whole problem is blood loss, and your patient has arterial pressure below 100, he has lost at least 40 percent of his stating blood volume. The many measurements, which are available in books and monographs of average blood volume in people of average body sizes, can be useful. You can look at a fellow and decide he must be 2 liters down, and you start to treat him on that basis, and then you watch and see if his urine output is coming back, his skin flow is improving, his arterial pressure is going up, and so on. I think it is the unusual patient in whom you really need the blood loss measurement carried through. On the other hand, some of these dreadfully sick people, such as Dr. Edward Frank was talking about, have several things going on at once – sepsis, some degree of hypovolemia, some degree of myocardial insufficiency, and some degree of congestive heart failure. It becomes easy to get yourself into a position where you don't really know whether

you are plus or minus with regard to half a dozen things in his physiology. For the care of the very seriously ill patient, every bit of precise data you can get helps.

Dr. E. Frank:

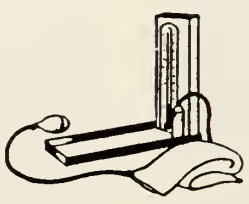
If you aren't doing central pressures in some of your very sick people, you could easily, because it doesn't require much of an outlay in equipment. These sets are available commercially with just a telephone call. One can obtain the central pressure catheters easily from a variety of sources and one can easily learn to put them in. They are not tricky at all. When we started we said to ourselves, "We hope we can do this without moving the patient to x-ray department." Taking a critically ill person, bouncing him through the hospital, up and down elevators, and in and out of corridors, without being monitored is not good for him. You just don't know what's happening to him on the way to the x-ray department, so that he is better off having the catheter put in without the fluoroscope. One can check it with a portable film at the bedside if you don't know where it is, but you can almost always tell. We've done hundreds of these now. To pick up the brachial vein, simply find the brachial artery in the arm just above the elbow medially. As you put the catheter up the vein, have the hind end of the catheter attached to a vertical saline column, and watch that column as the catheter goes upward. As it goes in a proper distance, obviously it will cross the first rib and enter the upper thoracic region. Once it gets in there, you will start to see respiratory oscillations; as the patient breathes in, it goes down, and as he breathes out, it goes up. If you start to see a respiratory rhythm in the CVP catheter column, you know you are in the chest. Almost in every instance the catheter will find its normal direction toward the superior vena cava and down into the chest. If it's not doing that, you will not see this respiratory deflection. As you go in further several centimeters, you will see some atrial beats developing, in addition to the respiratory inflections, and if you go further yet, you will see a sudden rise in pressure in that column which means you're in the ventricle, and that's no tragedy either, as long as you are not creating trouble. You simply know where you are. The only trouble you will create is sometimes you will produce an arrhythmia irritating the wall inside of the heart, and the thing to do then, of course, is to withdraw a couple of centimeters, and then you know you are in the superior vena cava. If you have any doubt about it, check it with a portable bedside x-ray. It is a very useful gadget to have in when you are dealing with a multifaceted volume problem, even in the absence of direct measurements of blood volume.

Q. How many days can you keep the catheter in without infection or complication?

Dr. E. Frank:

You should put it in initially with some degree of carefulness and sterility, as a sterile procedure at the bedside. Prep the arm carefully and set up a sterile field. You run it with a very dilute Heparin drip just to keep it open. You never stop this catheter flow, you keep it going very slowly. You can use it beautifully for fluid therapy. I would advise that you not use it for blood sampling. The house staff likes to use it for blood sampling because it's an easy way to the patient's blood supply. The trouble with using it for blood sampling, is that you are pulling blood which is not heparinated through this long catheter and it tends to increase the rate of thrombosis. But, if you keep a drip going through it with whatever you wish to give the patient, this can be used for all fluid therapy he needs, whether it be blood going in, or crystalloids, or whatever. To learn how to use the CVP catheter is a matter of someone showing you in 5 to 10 minutes how to do it. It's really not complex and I think anyone in this room could learn to use it very quickly. I think it is a useful gadget to have in the armamentarium of the institution.

How long can you leave it in? Any catheter in a vein is a hazard. We tend to switch, somewhere between 2 and 3 days, to the other arm. Hopefully, as I said before, usually the die is cast; in other words, you've either won or lost the battle well within that time.



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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

News From The Sixth National Cancer Conference

DENVER, COLORADO — Important gains against cancer in the last 25 years associated with improved diagnostic and treatment methods are reported by the National Cancer Institute of the National Institutes of Health in its latest evaluation of end results of cancer therapy at the 6th National Cancer Conference here sponsored by the American Cancer Society and the NCI.

From data on nearly 400,000 white patients in more than 100 hospitals in different parts of the country, increased survival was observed among patients with cancer of the colon, rectum, breast, uterine cervix, prostate gland, and a number of other body sites of a total of about 50 studied.

An important exception was lung cancer, the major cause of death in men. Although significant improvement was observed in survival of patients with localized disease, only one in five cancers of the lung was discovered in this early stage.

Cancer of the colon and rectum occurs more frequently than any other form in the United States. Additional analysis of the data from the study disclosed that an increasing number of patients with this type of cancer are receiving treatment, primarily surgery. A striking increase was observed in survival of such patients for five years or longer after diagnosis of their disease. The five-year survival rate for patients with cancer of the colon increased from 31% during 1940-49 to 46% during 1955-59. The comparable increase for patients with cancer of the rectum was from 28% to 40%.

The study also produced these findings:

Five-year survival rates for patients with breast cancer, the leading cause of cancer death in women, increased slowly but steadily, particularly among patients whose disease had spread to regional lymph nodes or adjacent tissues. The data suggest that such patients may have been diagnosed in an "earlier" phase of regional disease, but at least 10 years of follow-up must elapse before it can be determined whether a higher percentage of "cures" will be obtained.

The trend in cancer of the uterine cervix, the third most deadly form of malignancy in women, was toward a marked increase in diagnosis of carcinoma-in-situ, an early stage of the disease, and a decrease in occurrence of invasive cancer. This suggests more effective use of techniques for discovering this form of cancer before it spreads beyond the site of origin. However, survival rates for patients with invasive cancer of the cervix, which increased from the 1940's through the 1950's, remained essentially unchanged afterwards.

For cancer of the prostate, primarily a disease of older men, there was a definite change in the type of treatment during the 25-year period. A marked increase in the use of drugs, alone or in combination with surgery, was associated with steady increases in survival rates among patients with both localized and regional disease.

The five-year survival rate for male patients with localized cancer of the lung and bronchus increased from 9% in 1940-49 to 25% in 1955-59.

The report, "End Results in Cancer, Report No. 3," was released September 19 at the Sixth National Cancer Conference in Denver, Colorado, a quadrennial meeting sponsored by the National Cancer Institute and the American Cancer Society. It was prepared by the End Results Section of the Institute's Biometry Branch, which coordinates a national cooperative program for evaluating the end results of cancer treatment. The End Results Group consists of nine university hospital cancer registries and the central registries of California, Connecticut, and Massachusetts. Dr. Robert Ryan, Charity Hospital of Louisiana, New Orleans, is chairman. Dr. Sidney Cutler of the National Cancer Institute is executive secretary.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Exercise And Intermittent Claudication
Effect of Physical Training

There is suggestive evidence . . . that increased physical activity has a beneficial effect on the course and severity of coronary heart disease. It has been suggested that one possible mechanism for this protective influence has been that exercise may increase the collateral circulation to the myocardium: ischemia is considered to be a major stimulus for this increased vascularization. If this is indeed true, then it may also be possible to increase the collateral circulation to muscles that have inadequate blood flow due to arteriosclerosis obliterans.

. . . The data (from the previous study) seemed to indicate that the repeated stimulus for increased blood flow had a training effect, since . . . four men were able to walk longer, two got their pain later . . . *and* there was an increase in the resting systolic pressure (at the ankle) of two men. To investigate further the effects of training, five patients with arteriosclerosis obliterans were evaluated over a 3 to 8-month period of supervised, individualized exercise to assess the possible role of exercise as a therapeutic method in the treatment of intermittent claudication.

The data presented in this paper appear to have a single interpretation, namely, physical training is feasible and has a beneficial effect on selected patients with arteriosclerosis obliterans. This appears to be the result of improved collateral circulation to the obstructed leg at rest, during exercise and/or during the recovery period.

Submitted by — Jacob B. Dana, M.D. President, Maine Heart Association.

Reference — Skinner, J. S. and Strandness, D. E. Jr., Circulation, Vol. 36, pages 23-29, 1967.

Necrology

J. Ramser Crawford, M.D.

1889-1968

J. Ramser Crawford, M.D., 78, of Augusta, Maine died on June 11, 1968. He was born in Eufaula, Alabama on August 21, 1889, son of Joel Bennett and Anna Virginia Crawford.

Dr. Crawford graduated from Eufaula High School, and received his medical degree from Memphis Hospital Medical College in Tennessee in 1912. He interned at the New York Lying-In Hospital from 1913 to 1915 and served a residency at the Mt. Sinai Hospital in New York in 1916. In 1922, Dr. Crawford received a medical degree from New York University College of Medicine.

He was director of the Life Extension Institute of New York for forty-two years, and had served at one time as assistant medical director and later as the acting director. A Diplomate of the American Board of Radiology, he organized and directed the x-ray department of the Life Extension Institute, a post he held until retirement in 1960. In 1961, Dr. Crawford moved to Augusta and continued a limited practice of radiology there with his son, Dr. Joseph R. Crawford.

Dr. Crawford was an Honorary member of the Kennebec County Medical Association and the Maine Medical Association, having received a 50-year pin in 1962 and a 55-year pin in 1967. He was also a member of the American Medical Association, and was president of City Hospital of New York Alumni Society for many years and during this time compiled and edited the Society history. He received a citation for teaching on the Radiology staff from New York University College of Medicine. A 400-page book he co-authored with Dr. Eugene Lyman Fisk titled "How to Make the Periodic Health Examination," published by MacMillan, was cited as the first comprehensive guidebook for physicians making these examinations.

Surviving are his widow, Mrs. Mary McCool Crawford, a daughter, Virginia of New York; a son, Dr. Joseph R. of Augusta; a sister, Mrs. Annie Laurie Le Grand of Eufaula, Alabama; five grandchildren; cousins, nieces and nephews.

County Society Notes

KENNEBEC

The April 1968 meeting of the Kennebec County Medical Association was a joint meeting with Androscoggin County Medical Association. This joint meeting was held at Steckino's Restaurant in Lewiston, Maine.

The evening speaker was Guy Newell, M.D. of the National Cancer Institute, Carcinogenesis Branch and Children's Cancer Research Foundation, Harvard School of Public Health. Dr. Newell gave a most informative discussion of the subject Viruses and Human Neoplasia.

A meeting of the Kennebec County Medical Association was held at the Augusta Country Club in Augusta, Maine on May 16, 1968. This was the annual joint meeting of husbands and wives of this Association and was attended by eighty-three members and guests.

The meeting was conducted by Richard H. Dennis, M.D., President of the Association, who introduced Daniel F. Hanley, M.D., Executive Director of the Maine Medical Association, speaker of the evening. Dr. Hanley, who is the official physician to the United States Olympic Team, gave a most interesting and informative talk about the 1968 Winter Olympics.

During a brief business meeting Fennell P. Turner, M.D., Chief, Surgical Service, Veterans Administration Center, Togus, Maine was unanimously elected to membership.

The Kennebec County Medical Association meeting was held at the Holiday Inn in Augusta, Maine on September 19, 1968.

The business meeting was opened by the President, Richard H. Dennis, M.D.

Laurier E. Nolin, M.D. of Waterville, Maine was elected to membership.

A motion was made and passed stating that the Association would not actually participate in the Diabetes Week program for 1968. It was agreed that the President would appoint a Committee to re-evaluate the appointment of and duties of the Association's Diabetes Chairman in cooperation with the State Chairman in an effort to provide better preparation for the 1969 Diabetes effort.

The evening's program was devoted to Coronary Care. An excellent presentation was given by J. Warren Harthorne, M.D. of the Cardiac Catheterization Unit of the Massachusetts General Hospital. Dr. Harthorne gave a fascinating discussion of the characteristics and use of various pacemakers and intracardiac pacing devices. He urged that Coronary Care Units purchase so-called "demand" pacemakers. Dr. Harthorne concluded his presentation with showing of a new 16-MM movie depicting the technique of trans-venous insertion of intracardiac electrodes through the trans-jugular approach.

Francis A. Spellman, M.D., *Secretary*

SOMERSET

The Somerset County Medical Society held its annual meeting on August 27, 1968.

Guests at the meeting were Drs. Manu Chatterjee and Niles L. Perkins.

The topic for the meeting was a presentation of the County-wide Utilization Review Committee functions. The county, being largely rural, has organized the review functions at the county levels with all hospitals cooperating. This review has been effective, impartial and revealng. The statistics reveal areas of medical need and has been enthusiastically supported by the physicians in the county.

John P. Dow, M.D., *Secretary*

HANCOCK

A meeting of the Hancock County Medical Society was held on September 11, 1968 at the Faculty Club of the Maritime Academy in Castine, Maine with nine members and eight guests present.

Asa C. Adams, M.D., President of the Maine Medical Association, spoke briefly concerning the utilization review of institutions in which patient care is given by a physician-led team of medical workers. He also mentioned the efforts by the AMA to improve their public relations and suggested that this was also necessary in Maine.

Eliot T. Stadler, M.D. reported on the House of Delegates annual meeting in Rockland. Robert F. Russell, M.D. re-

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ported on the status of the maternal and infant care project and will obtain a more up-to-date report for our next meeting.

Edward Palmer, M.D., a neurosurgeon presently positioned at the Maritime Academy, was introduced. Acceptance of his application for membership was voted. Wesley English, M.D., a surgeon practicing in Bar Harbor, was also introduced.

Announcement was made of the October 9 meeting to be held at the Jordan River Country Club in Ellsworth, Maine with the speaker Wayne Libhart, Esq., of Bangor, Maine speaking on the Physician's Role in Legislation.

The speaker of the evening was Robert O. Kellogg, M.D., who was accompanied by his wife, Julia, giving an address on his experience with Project Hope in the summer of 196- at a seaport in Columbia, South America. This interesting and enlightening talk was colorfully illustrated with Kodachrome slides.

Bradley E. Brownlow, M.D., *Secretary*

News and Notes

Department of Health and Welfare
Division of Maternal and Child Health
Including Services for Crippled Children

(By Appointment Only)

Orthopedic Clinics

Augusta – Augusta General Hospital
1:00 p.m.: Dec. 19
Bangor – St. Joseph Hospital
9:00 a.m. and 1:00 p.m.: Nov. 21
Half-day sessions: 1:00 p.m.: Oct. 24, Dec. 26
Fort Fairfield – Community General Hospital
9:00 a.m. and 12:30 p.m.: Nov. 4
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Nov. 5
Houlton – Aroostook General Hospital
9:00 a.m.: Nov. 7
Lewiston – Central Maine General Hospital
9:00 a.m. and Bracing Clinic at 12:30 p.m.
(In conjunction with CMGH): Nov. 15, Dec. 20
Machias – Down East Community Hospital
9:00 a.m.: Nov. 22
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Monday (holidays excepted)
Presque Isle – Arthur R. Gould Memorial Hospital
9:00 a.m. and 12:30 p.m.: Nov. 6
Waterville – Thayer Hospital
9:00 a.m.: Oct. 23, Nov. 27

Cardiac Clinics

Bangor – St. Joseph Hospital
9:00 a.m.: Oct. 25, Nov. 8, 22, Dec. 13, 27
Portland – Maine Medical Center
9:00 a.m. (In conjunction with MMC): Every Friday (holidays excepted)

Pediatric Clinics

Bangor – St. Joseph Hospital
1:30 p.m.: Oct. 25, Nov. 22, Dec. 27
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Nov. 27

Houlton – Madigan Memorial Hospital
1:30 p.m.: Dec. 11
Presque Isle – Arthur R. Gould Memorial Hospital
1:30 p.m.: Oct. 23
Waterville – Thayer Hospital
9:00 a.m.: Nov. 13, Dec. 11

Clinics for Mentally Retarded Preschool Children

Waterville – Thayer Hospital
9:00 a.m.: Oct. 30, Nov. 6, 20, Dec. 4, 18
Lewiston – Central Maine General Hospital
9:00 a.m.: Nov. 4, Dec. 9
Lewiston – St. Mary's General Hospital
9:00 a.m.: Oct. 28, Nov. 25, Dec. 23

Cystic Fibrosis Clinics (In conjunction with the CMGH and MMC)

Lewiston – Central Maine General Hospital
9:00 a.m.: Nov. 1, Dec. 6
Portland – Maine Medical Center
9:00 a.m.: Nov. 19, Dec. 17

Convulsive Clinic

Fort Fairfield – Community General Hospital
(To be scheduled)

Hemophilia Clinic

Portland – Maine Medical Center
Appointments made through this office on an individual basis.
Out-patient service at the Maine Coast Memorial Hospital, Ellsworth, for pediatric, epilepsy and orthopedic services will be arranged by appointment only.

Family Planning Clinics

Portland – Maine Medical Center
Every Wednesday, every month.
Bangor – Eastern Maine General Hospital
First and third Friday every month. Morning clinic.

Letter to the Editor

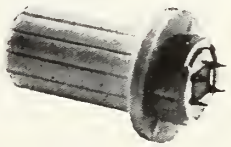
To the Editor:

In view of the widespread use of the organic phosphorus insecticides, I should like to suggest that your office *notify all the State Medical Associations or if possible all the doctors in the state that there is available at the Poison Control Center at Togus a supply of the drug Pralidoxime chloride (2-PAM chloride), an effective antidote for this class of insecticides.*

This material is available from Ayerst Laboratories and it would seem to me to be wise to suggest to hospitals in the agricultural areas of the state that they keep some of this drug on hand. We will, of course, be glad to supply advice concerning its use and if necessary a supply of the drug to any physician in the state in an emergency. I do believe, however, that at least in Aroostook County there should be a supply and its presence should be publicized.

ROBERT L. OHLER, M.D.
Acting Assistant Chief of Staff
General Medical and Surgical Hospital
Veterans Administration Center
Togus, Maine 04330

Tuberculosis? Influenza?
Pneumonia? Leukemia?
Hodgkin's Disease? Syphilis?
Systemic Fungal Diseases?
Chronic Chest Diseases?
or
HISTO?
(Histoplasmosis—"The Masquerader")



A new aid in differential diagnosis
HISTOPLASMIN, TINE TEST
(Rosenthal)
The LEDERTINE™ Applicator with the Blue Handle

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

Lederle

Ask your representative for details or write Medical Advisory Dept., Lederle Laboratories, Pearl River, New York 10965. 4-66-8

New Edition — Diagnostic Standards And Classification of Tuberculosis

Free to physicians upon request

The 1968 edition follows the contents of the previous version but with important changes. For example: the section on skin testing deals with doubtful reactions and multiple puncture tests; the requirements for inactive status are shortened; there is a new section on classification of tuberculosis in children.

This authoritative booklet by the American Thoracic Society is provided through the Maine Thoracic Society. It will be available in November.

To obtain a copy clip out coupon below and mail to Maine TB and Health Association, 2 Bridge Street, Augusta, Maine 04330.

To: Maine TB and Health Assn.

Please send a copy of Diagnostic Standards to the undersigned:

NAME .....

STREET .....

CITY .....

M.M.A. SPECIAL COMMITTEES 1968-1969

Continued from Page 212

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TAO®(triacetyloleandomycin)
Brief Summary

INDICATIONS: Include streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents.

CONTRAINDICATIONS: Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug.

PRECAUTIONS: CAUTION: USE OF THIS DRUG MAY PRODUCE ALTERATIONS IN LIVER FUNCTION TESTS AND JAUNDICE. CLINICAL EXPERIENCE AVAILABLE THUS FAR INDICATES THAT THESE LIVER CHANGES WERE REVERSIBLE FOLLOWING DISCONTINUATION OF THE DRUG.

Not recommended for prophylaxis or in the treatment of infectious processes, which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgment dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including dark-field examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

ADVERSE REACTIONS: Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.



J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

This advertisement for TAO® (triacetyloleandomycin), published at the request of the Food and Drug Administration, replaces a recent one which the FDA regards as misleading.

The advertisement headlined "new evidence for TAO . . ." and emphasized that the drug is "for the frequently seen respiratory infection in the office and for a problem pathogen* in the hospital. *Staphylococcus aureus."

We emphasize that triacetyloleandomycin is to be used only for acute, severe bacterial infections where adequate sensitivity testing has demonstrated susceptibility to this drug and resistance to other less toxic agents. In view of the possible, but reversible, jaundice and hepatotoxicity of this drug, other less toxic agents should be used unless the organism is resistant to those agents, or in those cases where hypersensitivity precludes their use.

TAO is contraindicated in preexisting liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug.

The advertisement emphasized that no tooth staining has been reported after ten years of use of this antibiotic. The Food and Drug Administration regards this claim as an implied comparison suggesting that triacetyloleandomycin and tetracycline have a similar antibacterial spectrum of effectiveness, and that TAO has less toxic potential. Any such implication is not intended and, of course, would be invalid.

The advertisement referred to a research study in which patients were given triacetyloleandomycin prior to determining the susceptibility of the offending organism. Any suggestion that triacetyloleandomycin be used clinically without first determining susceptibility of the offending organism should be disregarded.



J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
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Geigy



Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.

One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Regroton produces a smooth, long-acting effect that usually reduces both systolic and diastolic pressures. At the same time it often acts to allay anxiety and nervous tension associated with hypertension.

Although Regroton is generally well tolerated, adverse reactions may occur. This drug is contraindicated in mental depression, demonstrated hypersensitivity, and most cases of severe renal or hepatic diseases. For a complete list of side effects, please see the Prescribing Information summarized on the following page.

Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.



One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000.
(B) 46-600-C

For details, please see complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

RE-6225

ACHROMYCIN® WORKS HERE
TETRACYCLINE



Copyright, American Map Co., Inc., New York, No. NY 388

See inside fold for product summary.

Effectiveness: ACHROMYCIN Tetracycline is a crystalline broad-spectrum antibiotic which provides effective therapeutic activity against susceptible microorganisms.

Contraindication: History of hypersensitivity to tetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Some patients may develop a photodynamic reaction to natural or artificial sunlight. Those with a history of photosensitivity reactions should avoid direct exposure to sunlight while under treatment. Discontinue drug at first evidence of skin discomfort.

Precautions: Use may result in overgrowth of nonsusceptible organisms. Constant observation is essential. If new infections appear, take appropriate measures. Use of tetracycline during teeth development may cause discoloration of teeth.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity reaction, onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose-related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels have been reported following full therapeutic dosage. This symptom has disappeared rapidly when drug is discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. Tetracycline may form a stable calcium complex in bone-forming tissue. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: One Gm. per day, in 4 divided doses of 250 mg. each. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

ACHROMYCIN® WORKS HERE
TETRACYCLINE

Actually ACHROMYCIN works wherever the infection is due to an organism your lab cultures have shown to be tetracycline-sensitive. No other tetracycline—or analogue—can assure you of quicker or more effective antibiotic action. After all, isn't that what you want for your patient?

ACHROMYCIN was a pioneer in tetracycline therapy. Seventeen years of experience have shown that when the respiratory system, the genitourinary system, or the skin and soft tissue require treatment for infection probably caused by any of a number of sensitive strains, ACHROMYCIN is a wise choice for therapy while awaiting test results.

Available in 31 useful forms to meet your situational needs.

ACHROMYCIN® V
TETRACYCLINE CAPSULES

The cost differential—inconsequential

Lederle

LEDERLE LABORATORIES
A Division of
American Cyanamid Company
Pearl River, New York 10965



After the picnic even Gramps Was a victim of intestinal cramps

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In elderly patients it is particularly important to stop the diarrhea fast. Parepectolin helps you control diarrhea promptly and gain the patient's confidence until etiology has been determined.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

ROER

WILLIAM H. RORER, INC.
Fort Washington, Pa.



THE BETTMAN ARCHIVE

Just one tablet at bedtime • Prevents painful night leg cramps • Permits restful sleep

How many of your patients stamp their feet at night and lose sleep because of painful leg cramps? Unless prompted, they usually fail to report this distressing condition and suffer needlessly.

One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

Prescribing information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

And let you control the dosage.

With Novahistine LP tablets and Novahistine Singlet tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever.

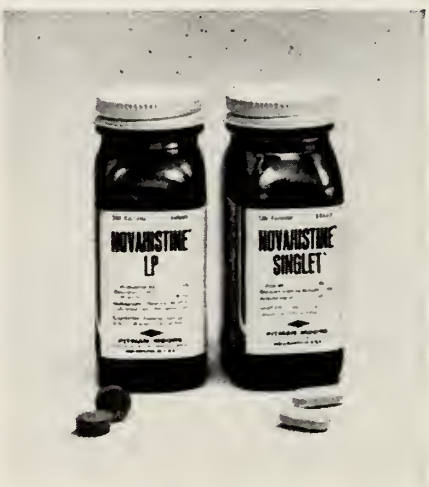
Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.

Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg., chlorpheniramine maleate, 8 mg., and acetaminophen, 500 mg.



DOW PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS



"Upper respiratory infection! I thought everything was a 'virus' these days?"



Q. How much does the **anticostive*** **hematinic** cost?

A. No more than costive hematinics cost!

The anticostive hematinic is
PERITINIC®
Hematinic with Vitamins and Fecal Softener

A tablet-a-day provides:

● Elemental Iron (as Ferrous Fumarate)	100 mg
● Dioctyl Sodium Sulfosuccinate (to counteract constipating effect of iron)	100 mg
Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

*

anticostive, *adj.* (*anti* opposed to *costive* causing constipation.) Against constipation. Now isn't that a good idea in an iron-containing hematinic?

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

490-7R—6064

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.



A realistic approach to pain relief



Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

New

Therapeutic breakthrough in non-narcotic control of the pain of trigeminal neuralgia

Tegretol®
carbamazepine

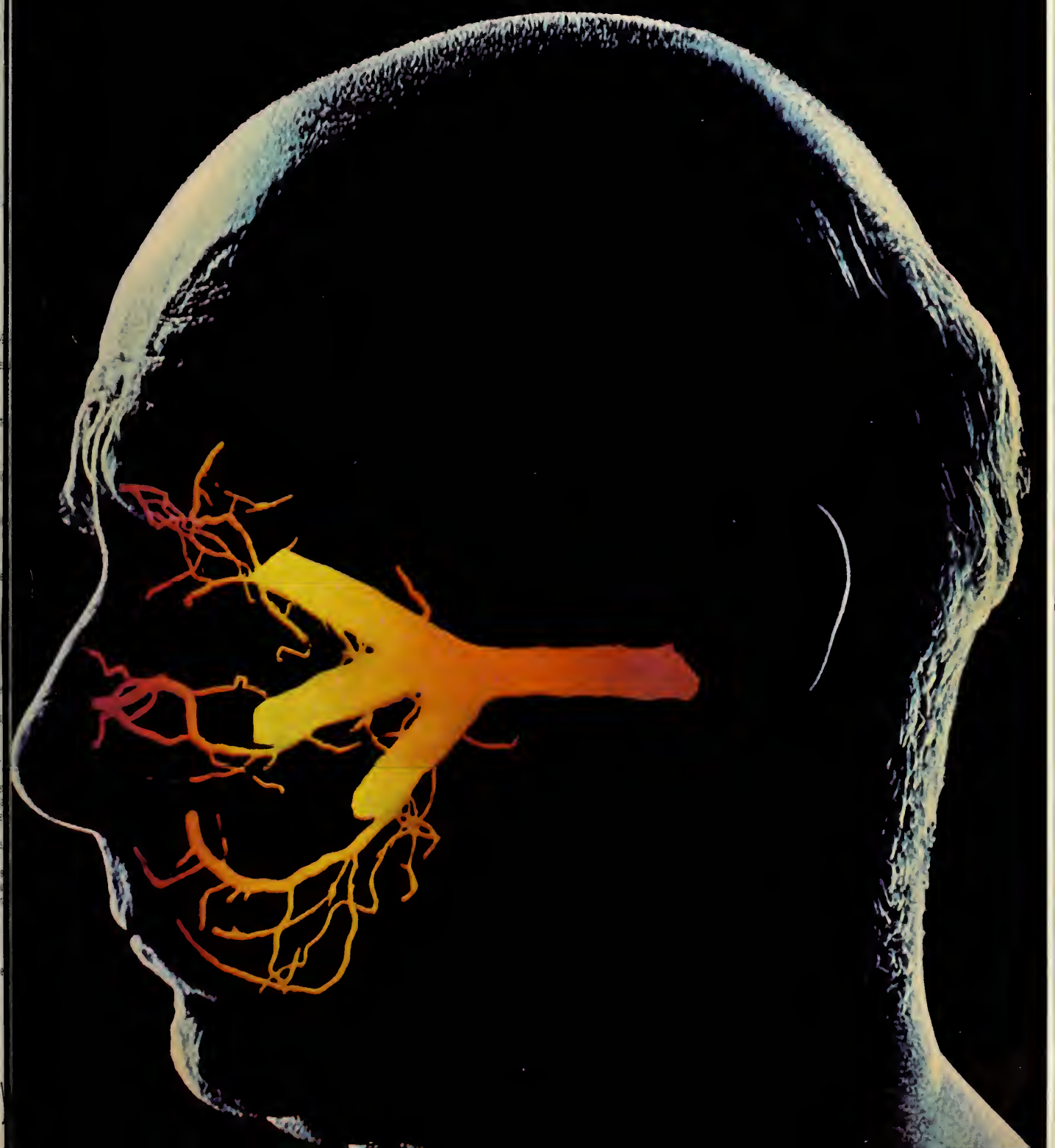
Warning
Fatal cases of aplastic anemia have been reported following treatment with Tegretol. Agranulocytosis, thrombocytopenia and transitory leukopenia have also been observed.
Complete blood and platelet counts should be done prior to and at regular intervals during treatment with the drug (see recommendations under "Important Note and Precautions") to help in the early detection of serious bone marrow injury. Abnormalities in initial blood tests should rule out use of the drug. Also, patients should be made aware of such early toxic signs of a potential hematologic problem as fever, sore throat, mouth ulcers, easy bruising and petechial or purpuric hemorrhage. Should such signs appear, the patient should be advised to discontinue the drug and to report to the physician immediately.

Indication Tegretol is indicated in the treatment of the pain associated with true trigeminal neuralgia. It is not a simple analgesic and should never be administered for relief of trivial facial aches or pains.
Contraindication Do not use in those with a known sensitivity to any tricyclic compound or in those being treated with M.A.O.I. agents. As long a period as possible should elapse before using Tegretol in patients who have been treated with M.A.O.I.'s, with a minimum of 7 days. In such cases, initial dosage should be low and the patient's reaction to gradual increments closely observed.
Important Note and Precautions Familiarity with the clinical symptoms which lead to an accurate diagnosis of true trigeminal neuralgia and with the complete prescribing information, careful patient selection, a thorough examination before treatment and close patient supervision throughout the treatment period are essential to the safe and effective use of this drug.
Where feasible, Tegretol should not be used in conjunction with any potent drug which may increase the possibility of toxic reactions.
In pregnancy, the drug should not be prescribed during the first trimester and thereafter only to patients in whom the clinical situation warrants the potential risk. It should not be administered to nursing mothers.
Patients with increased intraocular pressure should be closely observed during treatment with this drug because of its anticholinergic effect.
Because of the drug's relationship to other tricyclic compounds, the possibility of activation of latent psychosis and, in the elderly, of confusion or agitation, should be considered.
Dizziness and drowsiness may occur and patients should be cautioned about the hazards of operating machinery or automobiles and of engaging in other hazardous tasks.
Use cautiously in patients with a history of coronary artery disease, organic heart disease, congestive failure or liver disease.
Before initiating therapy, the following laboratory procedures should be performed:
1. Complete blood and platelet counts which, if abnormal, should rule out the use of the drug.
2. Baseline evaluations of liver function.
During treatment with Tegretol, the following laboratory procedures should be performed:
1. Complete blood and platelet counts should be done at intervals of one week during the first month of drug treatment, every two weeks during the second and third months, and at monthly intervals thereafter for as long as the patient is taking the drug. A trend toward a decreasing white blood cell count should suggest a dosage reduction and more frequent laboratory and clinical evaluations. Should this trend continue, the drug should be discontinued.
2. Liver function tests must be performed at regular intervals during treatment with this drug since liver damage may occur during therapy. The drug should be discontinued immediately in cases of aggravated liver dysfunction or active liver disease.
3. Periodic eye examinations, including slit-lamp, funduscopy and tonometry, are recommended for patients being treated with this drug since many phenothiazines and related drugs have been shown to cause eye changes.
4. Complete urinalysis and BUN should be done on patients treated with Tegretol because of observed renal dysfunction.
Adverse Reactions Dizziness, drowsiness, unsteadiness on the feet, nausea, vomiting, aplastic anemia, transitory leukopenia, agranulocytosis eosinophilia, leukocytosis, thrombocytopenia, purpura, abnormalities in liver function tests, cholestatic and hepatocellular jaundice, urinary frequency, acute urinary retention, oliguria with elevated blood pressure, albuminuria, glycosuria, elevated BUN, microscopic deposits in the urine, impotence, disturbances of coordination, confusion, headache, fatigue, blurred vision, transient diplopia and oculomotor disturbances, speech disturbances, abnormal involuntary movements, peripheral neuritis and paresthesias, depression with agitation, talkativeness, nystagmus, tinnitus, paralysis and other symptoms of cerebral arterial insufficiency, pruritic and erythematous rashes, urticaria, Stevens-Johnson syndrome, photosensitivity reactions, alterations in skin pigmentation, exfoliative dermatitis, alopecia, diaphoresis, recurrence of thrombophlebitis, erythema multiforme and nodosum, aggravation of disseminated lupus erythematosus, gastric distress, abdominal pain, diarrhea, constipation, anorexia, dryness of the mouth and pharynx, glossitis, stomatitis, fever, chills, adenopathy, lymphadenopathy, aching joints and muscles, leg cramps, conjunctivitis, left ventricular failure, aggravation of hypertension, hypotension, syncope and collapse, edema, aggravation of coronary artery disease and congestive heart failure. (Whether these cardiovascular effects are drug-related is not known. However, some of these complications have resulted in fatalities.) The necessity for discontinuing the drug should be dictated by the gravity and severity of the adverse reactions.
Dosage and Administration The drug should always be taken with meals, if possible.
Initial: One-half tablet (100 mg.) b.i.d. on the first day. Thereafter, the dose should be increased in one-half tablet (100 mg.) increments every 12 hours until freedom from pain is achieved. To relieve pain, between 200 mg. and 1200 mg. per 24 hours may be necessary.
Maintenance: Initial control of pain can be maintained in most patients with a dose of 400 mg. to 800 mg. daily. Maintenance doses may range between 200 mg. and 1200 mg. daily.
At least once every 3 months during treatment period attempts should be made to discontinue the drug or to reduce the dose to the minimum effective level.
Availability Round, white, single-scored tablets of 200 mg. in bottles of 100 and 1000. (B)46-820-A
For complete details, please see Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

Geigy

uncommon relief of uncommon pain



The Divorced Depressive: "Forty, Forgotten

"Had a large wedding."
"Had a fine home and family."



TO-5757

..Forlorn"

'Had a divorce."
'I'm a real loser,
and so are
the kids."



in depression

The loss of marital compatibility results in nearly 500,000 U.S. divorces each year.

Depression characterized by untold guilt feelings, grief and loneliness may follow.

When you diagnose depression, Tofrānil may be indicated for relief.

As maintenance therapy during the active phase of depression, Tofrānil can often help prevent relapse.

The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated. In patients with cardiovascular disease, thyroid disorders, increased intraocular pressure; in those receiving anticholinergics (including antiparkinsonism agents), thyroid medication or antihypertensive adrenergic neuron-blocking agents; and in those in their first trimester of pregnancy – the special precautions listed in the Prescribing Information should be carefully observed.

Toxic reactions severe enough to require discontinuation of Tofrānil are uncommon. However, for complete details, please refer to the complete Prescribing Information.

Turn page for brief summary of Prescribing Information.

Tofrānil® imipramine hydrochloride
Geigy

in depression





Tofrānil® Geigy

imipramine
hydrochloride

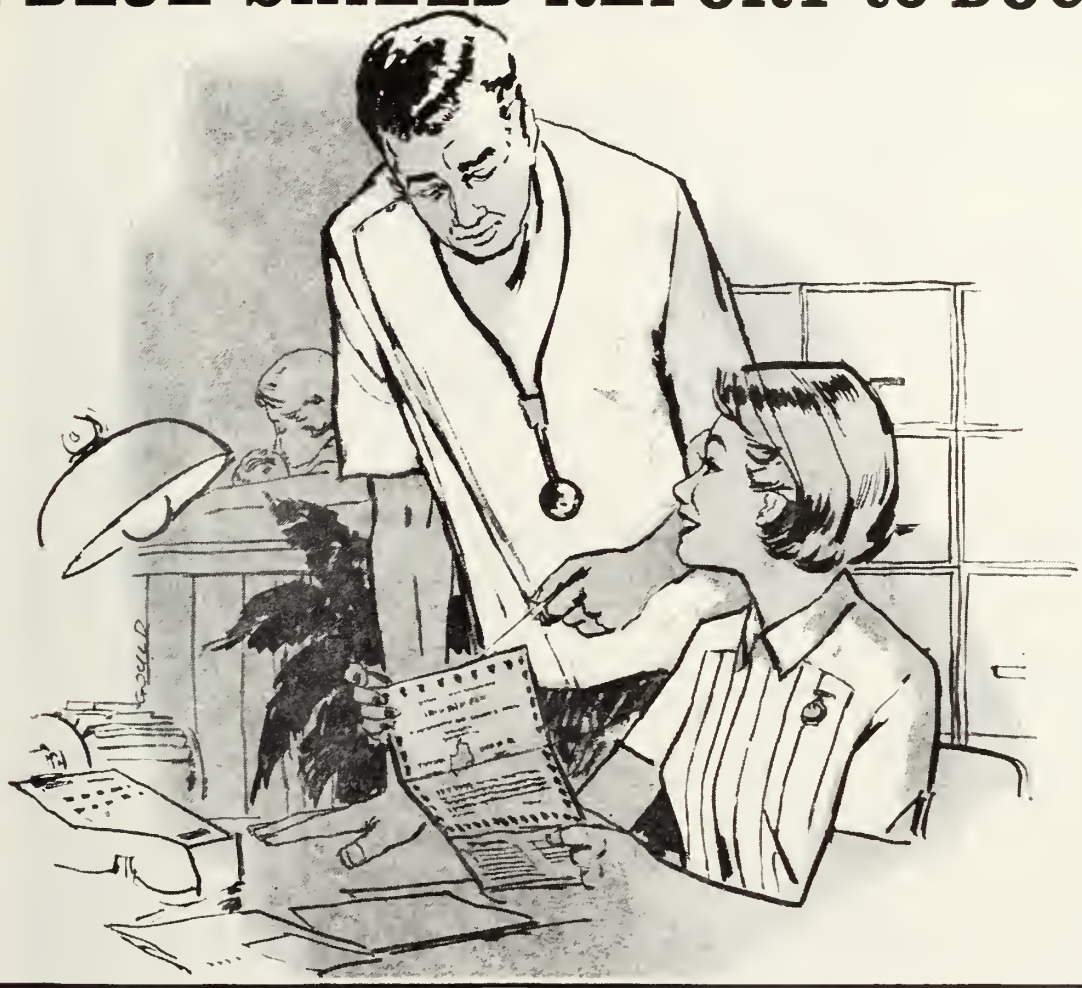
Tofrānil®, imipramine hydrochloride
Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of this agent and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before this drug may be substituted. Initial dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, it should not be used during the first trimester of pregnancy. Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy. Because of its anticholinergic effect, caution should be observed in prescribing the drug for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when this compound was added to the regimen. Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 years of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, disturbances of accommodation, sweating, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and disorientation), activation of psychosis in schizophrenics and agitation (including hypomanic and manic episodes) which may require dosage reduction and/or addition of a tranquilizer or temporary discontinuation of the drug, epileptiform seizures, orthostatic hypotension and substantial blood pressure fall in hypertensive patients, purpura, transient jaundice, bone marrow depression including agranulocytosis, sensitization and skin rash including photosensitization, eosinophilia, and mild withdrawal symptoms on sudden discontinuation after prolonged treatment with high doses. Occasional hormonal effects (impotence, decreased libido, and estrogenic effects) may be observed. Atropine-like effects may be more pronounced (e.g. paralytic ileus) in susceptible patients and in those using anticholinergic agents (including antiparkinsonism drugs).
Outpatient Adult Dosage: Initially, 75 mg. daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)R-46-850-C

For complete details, please refer to the full Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

TO-6757

A BLUE SHIELD REPORT to DOCTORS



REPORT # 17

SERVICE BENEFIT PROVISION

Question? Must all Blue Shield payments be accepted as full payment for covered services?

Answer. No. Only service benefit payments as indicated by an "S" to the left of the contract number on the voucher part of the check. Even here, the physician may have a right to make his regular charge if he has information which would void the service provisions shown under Article 11 of the contract.

All other payments are indemnity and the physician has a right to bill the difference between the Blue Shield payment and his regular charge.

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With Over 800 Participating MDs

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PORTLAND, MAINE 04101

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Each Cough Calmer™ contains the same active ingredients as a half-teaspoonful of Robitussin-DM® Glyceryl guaiacolate, 50 mg., Dextromethorphan hydrobromide, 7.5 mg.
A. H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS



"All Registered Nurses are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards. Therefore, all registered nurses are alike.

That's nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all registered nurses aren't alike, either.





Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst, & Gynec. *65*:311 (Feb.) 1953.



ROER

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Fort Washington, Pa.

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phosphorated carbohydrate solution
emesis control

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Endorsed by the Maine Medical Association

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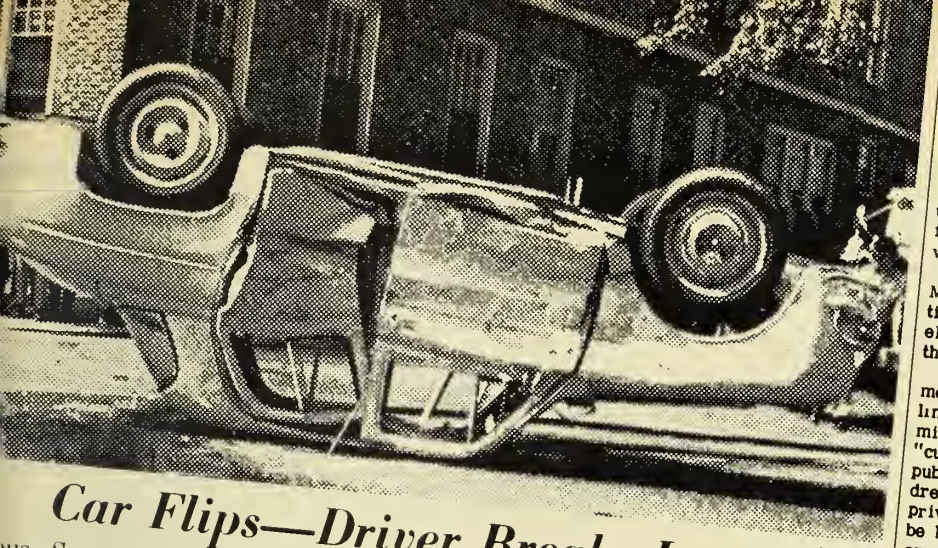
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EDWARD D. NOYES III



STAFF PHOTO

Car Flips—Driver Breaks Leg

...us, Sept. 7. John P. Jones of ... incurred a broken leg today ... driving ... Patrolman B. R. Brown, the car hit a fire hydrant and flipped over on its ... Hasn't he ... car.

For se... board h... statemer... issue, a... tember th... fications'... ton dicta... Althou... made Mo... down by a... ter shar... flat obje... was pass... Board... McCredi... tion" s'... elimir... the st... The c... ment ca'... limit ra'... mile li... "cut-of... public... dren... priv... be b... or th... schoo... The... so so... rathe... burs...

He's had enough excitement for one day.

For the patient who has been through an accident, the worry and anxiety following the experience may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—*to take the nervous "edge" off,* so the rest of the formula can control the pain more effectively.

Phenaphen® with Codeine

Phenaphen® with Codeine No. 2, No. 3, or No. 4 contains: *Phenobarbital* (¼ gr.), 16.2 mg. (Warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4). (Warning: may be habit forming).

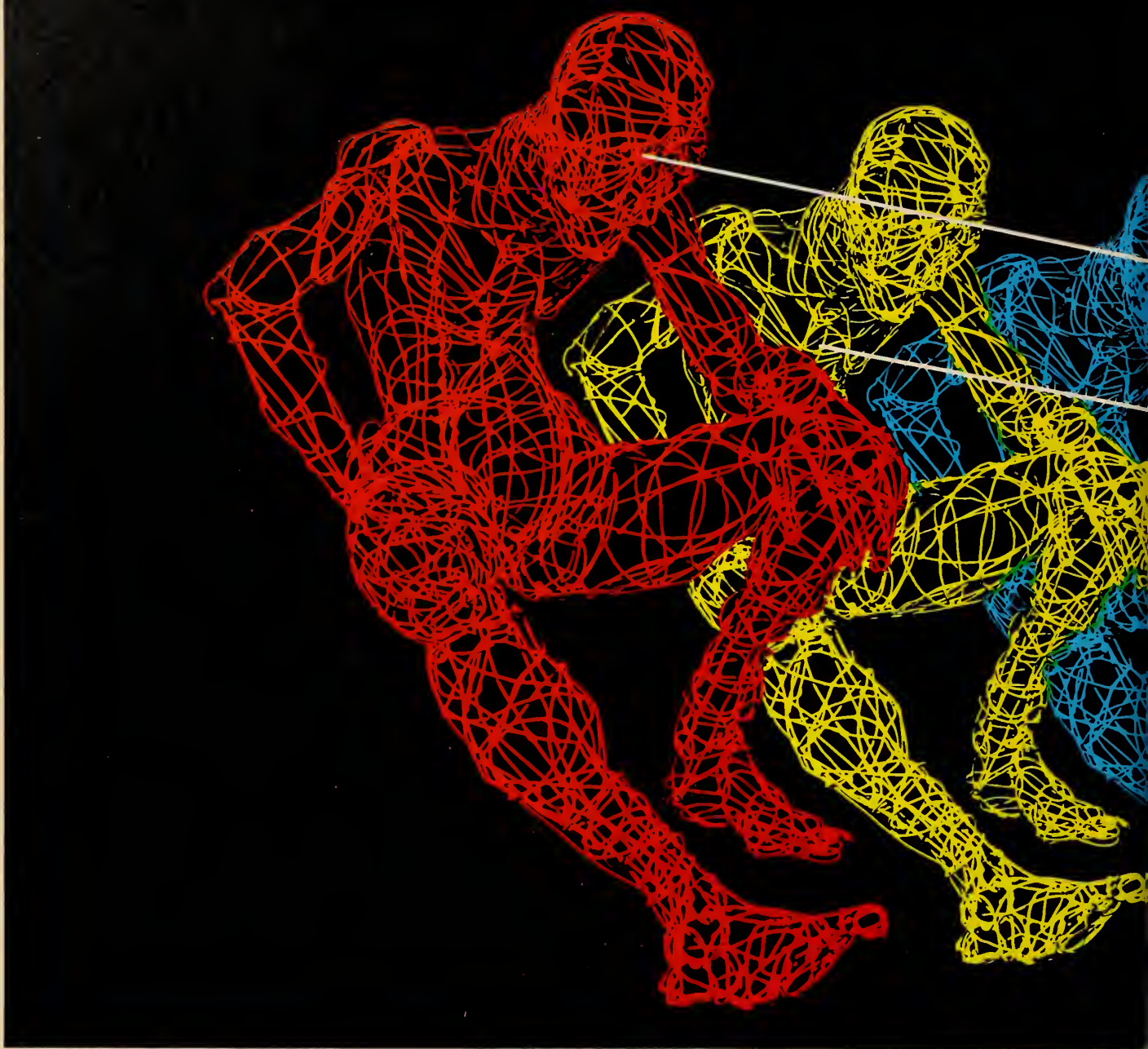
THE COMPOUND ANALGESIC THAT CALMS INSTEAD OF CAFFEINATES

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** 1 or 2 capsules at 2 to 4 hour intervals, or as directed by physician. For further details see product literature.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220 A·H·ROBINS



a comprehensive hematinic



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	150 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin (The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	7.5 mcg.
Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	1 mg.

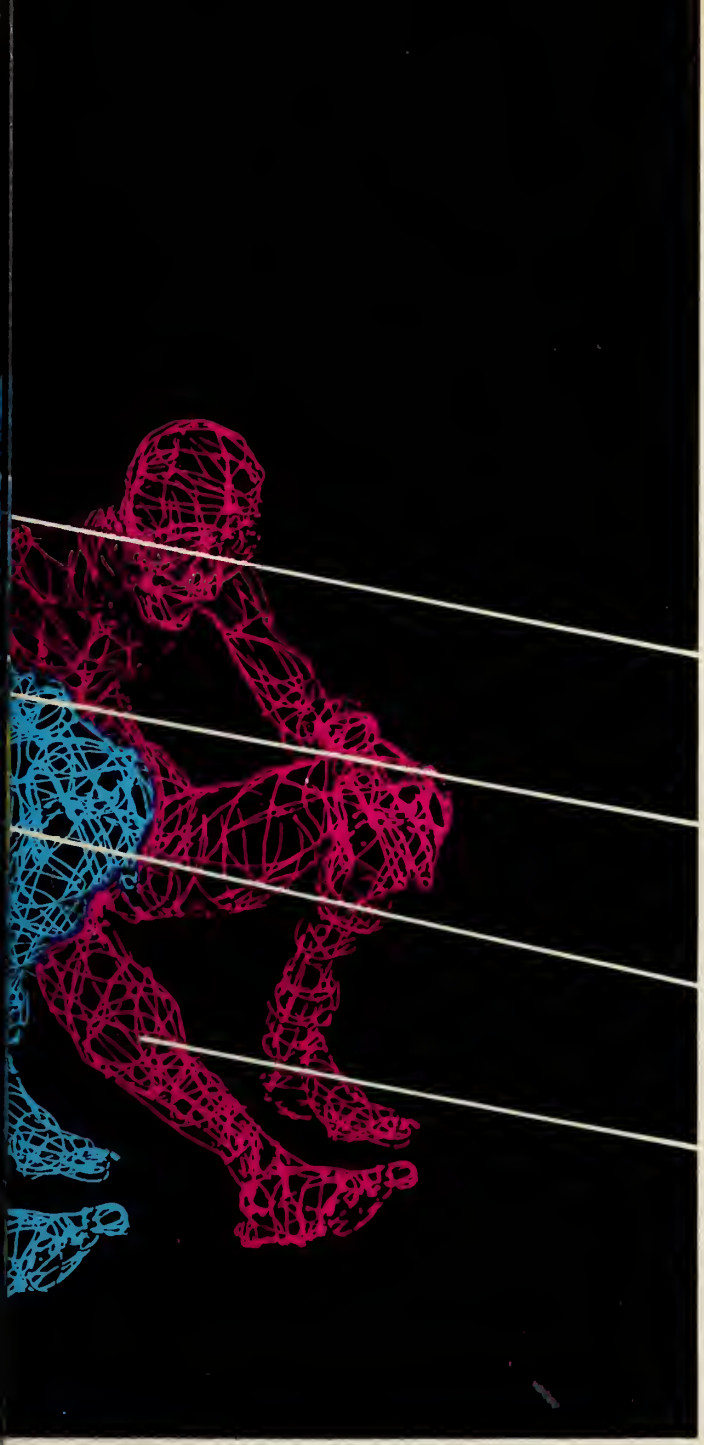
Indications: Trinsicon® (hematinic concentrate with intrinsic factor, Lilly) is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia.

Contraindications: Hemochromatosis and hemosiderosis.

Precautions: Anemia is a manifestation that requires appropria investigation to determine its cause or causes.

In pernicious anemia, the use of folic acid without adequa vitamin B_{12} therapy may result in hematologic remission but ne rological progression. Adequate doses of vitamin B_{12} (parenter or oral with potent intrinsic factor as in Trinsicon® [hematin concentrate with intrinsic factor, Lilly]) usually prevent, halt, improve the neurological changes.

As with all preparations containing intrinsic factor, resistanc may develop in some cases of pernicious anemia to the potenti tion of absorption of physiological doses of vitamin B_{12}. If resis ance occurs, parenteral therapy, or oral therapy with so-calle massive doses of vitamin B_{12}, may be necessary. No single reg men fits all cases, and the status of the patient observed follow-up is the final criterion for adequacy of therapy. Period



You can treat combined deficiencies with

Trinsicon®

—the multifactor hematinic

Vitamin B_{12} plus intrinsic factor (15 mcg. B_{12} activity)—helps provide adequate levels of this important vitamin.

Folic acid (1 mg.)—treats nutritional macrocytic anemias and/or malabsorption syndromes.

Ascorbic acid (75 mg.)—augments the conversion of folic acid to its active form and helps iron absorption.

Iron (110 mg.)—treats hypochromic anemia.

clinical and laboratory studies are considered essential and are recommended.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastro-intestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects.

In extremely rare instances, skin rash suggesting allergy has followed oral administration of liver-stomach material. Instances of apparent allergic sensitization have also been reported after oral administration of folic acid.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500. [032568]

Additional information available to physicians upon request.

Eli Lilly and Company, Indianapolis, Indiana 46206.

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Lilly

the antacid puzzle

In peptic ulcer:



solved by Mylanta®

aluminum and magnesium hydroxides *plus* simethicone

"will it ease the pain?"

Mylanta helps relieve ulcer pain with the two most widely prescribed antacids: aluminum and magnesium hydroxides.

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Mylanta *also* contains simethicone: for concomitant relief of G.I. gas distress.

"will this one taste O. K.?"

The *prolonged* acceptance of Mylanta was recently confirmed in 87.5% of 104 patients—after a total of 20,459 documented days of therapy.* *Danhof, I. E.: Report on file.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. *Dosage:* One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

Stuart

Division/Pasadena, Calif.
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When it's more than a bad cold



your patient can feel better while he's getting better

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Each tablet contains: ACHROMYCIN™ Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In tetracycline-sensitive bacterial infection complicating respiratory allergy, ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle

348-8

ready for bed..



but not for sleep

...because psychic tension may not stop at night

The calming action of Valium (diazepam) helps counteract psychic tension and reduce overreaction to stresses during the day. Often the t.i.d. dosage schedule is enough to prevent build-up of tenseness that may interfere with sleep at night.

However, when psychic tension does contribute to sleeplessness, Valium can be especially useful. A tablet at bedtime, added to the daytime t.i.d. dosage, can help your patient be ready for bed *and* for sleep.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium® (diazepam)

ROCHE

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

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THE JOURNAL of The Maine Medical Association

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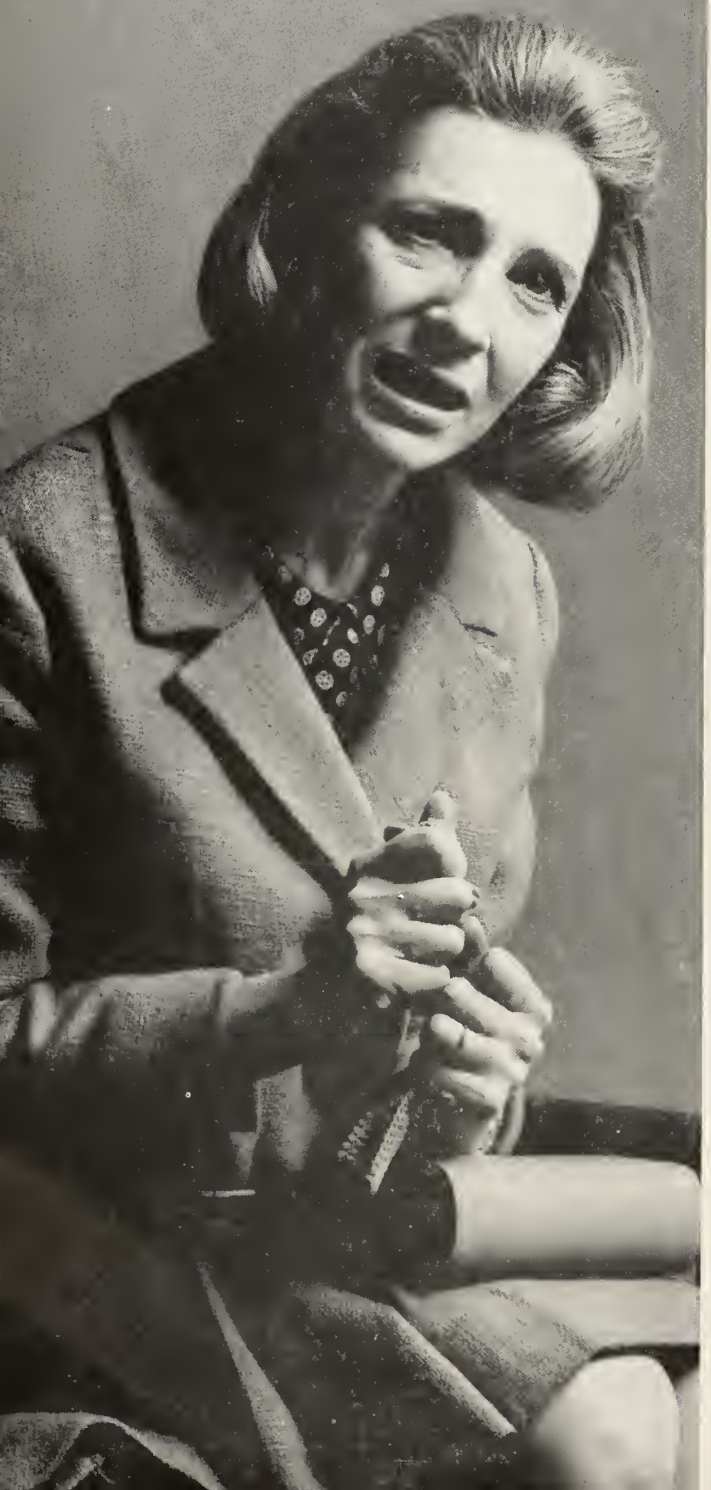
DEPRESSIONS IN THE ELDERLY 227
Frank S. Broggi, M.D., Portland, Me.

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Is it depression?

She says "I'm always on edge..."



...but her other symptoms:

depressed mood, insomnia, anorexia, feelings of guilt

strongly suggest an underlying depression.

---

when the diagnosis is depression

ELAVIL® HCl

(AMITRIPTYLINE HCl) MSD

Indications: Mental depression and mild anxiety accompan ing depression.

Contraindications: Glaucoma and predisposition to urinary r tention. Not recommended in pregnancy.

Precautions and Side Effects: Drowsiness may occur within th first few days of therapy. Patients should be warned again driving a car or operating machinery or appliances requirin alert attention. When depression is accompanied by anxie or agitation too severe to be controlled by ELAVIL HCl alon a phenothiazine tranquilizer may be given concomitantl Suicide is always a possibility in mental depression and ma remain until significant remission occurs. Supervise patien closely in case they may require hospitalization or concomita electroshock therapy. Untoward reactions have been reporte after the combined use of antidepressant agents havin varying modes of activity. Accordingly, consider possibili of potentiation in combined use of antidepressants. Mon amine oxidase inhibitor drugs may potentiate other drugs an such potentiation may even cause death; permit at least tw weeks to elapse between administration of two agents; such patients, initiate therapy with ELAVIL HCl cautiously wi gradual increase in dosage required to obtain a satisfacto response. Caution patients about errors of judgment due change in mood, and that the response to alcohol may b potentiated. May provoke mania or hypomania in manic-d pressive patients.

Side effects include drowsiness; dizziness; nausea; excitemer hypotension; fine tremor; jitteriness; weakness; headach heartburn; anorexia; increased perspiration; incoordinatio allergic-type reactions manifested by skin rash, swelling face and tongue, itching; numbness and tingling of limb including peripheral neuropathy; activation of schizophren which may require phenothiazine tranquilizer therapy; ep leptiform seizures in chronic schizophrenics; temporary co fusion, disturbed concentration or, rarely, transient visu hallucinations on high doses; evidence of anticholinergic a tivity, such as tachycardia, dryness of the mouth, blurring vision, urinary retention, constipation; paralytic ileus; jau dice; agranulocytosis.

Careful observation of all patients is recommended. The an depressant activity may be evident within 3 or 4 days may take as long as 30 days to develop adequately, and la of response sometimes occurs. Response to medication w vary according to severity as well as type of depression pre ent. Elderly patients and adolescents can often be manage on lower dosage levels.

Supplied: Tablets ELAVIL HCl, containing 10 mg., 25 mg., ar 50 mg. amitriptyline HCl, bottles of 100 and 1000; Injectio ELAVIL HCl, in 10-cc. vials, containing per cc.: 10 mg. an triptyline HCl, 44 mg. dextrose, 1.5 mg. methylparaben, ar 0.2 mg. propylparaben.

For more detailed information, consult your Merck Sharp Dohme representative or see the package circular.

MERCK SHARP & DOHME Division of Merck & Co Inc West Point Pa 19

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IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
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- Supplied in bottles of twenty-five 3,000 unit tablets.



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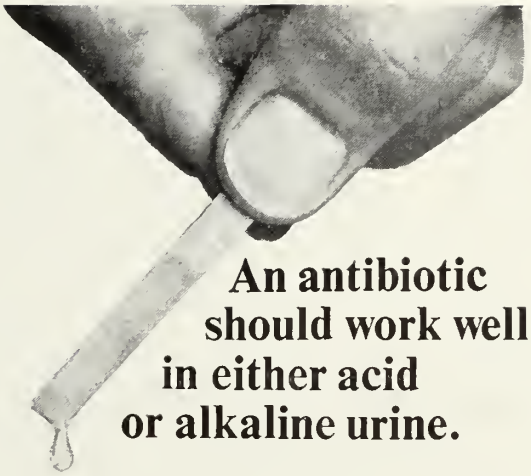
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An antibiotic should work well in either acid or alkaline urine.

It isn't always necessary to adjust urinary pH in treating G.U. infections.

Not when the causative organism is a strain sensitive to DECLOMYCIN® Demethylchlortetracycline, as is often the case.

DECLOMYCIN remains stable and active in either acid or alkaline urine. So there's no need to acidify the urine to keep the antibiotic at work.

Why match the urine to the antibiotic...when you can match the antibiotic to the urine...by prescribing DECLOMYCIN. A b.i.d. dosage makes therapy convenient for your patient.

Effectiveness: DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines in infections caused by organisms sensitive to the tetracyclines.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system – anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin – maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney – rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions–urticaria, angioneurotic edema, anaphylaxis. Teeth – dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Capsules: 150 mg; Tablets: film coated – 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

355-8

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Easy on the Budget...
Easy on the Mother

Tablets & Elixir

For Iron Deficiency Anemia

BREON LABORATORIES INC.
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EDWARD D. NOYES III

In the complex picture of moderate to severe anxiety...



there is a new reason for prescribing Mellaril (Thioridazine HCl)

effectiveness in mixed anxiety-depression

Long recognized for its usefulness in the treatment of moderate to severe anxiety, Mellaril is now also known to be effective against mixed anxiety-depression.

Often the symptoms of anxiety states are difficult to sort out—even with the most careful probing. The patient may manifest symptoms of agitation, restlessness, insomnia, somatic complaints. But what of the depression that may be mixed in the total picture? It is reassuring to know that Mellaril may be prescribed—with strong possibilities of success—when there is anxiety alone or a mixture of anxiety and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

Mellaril®
(Thioridazine HCl)
25 mg. t.i.d.

for moderate to severe anxiety and mixed anxiety-depression

SANDOZ

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Louie lost weeks with acute shoulder bursitis. That's a lo
of pain, stiffness and tenderness...and also a lot of fish
It might have been different with **Butazolidin® alka**

100 mg. phenylbutazone
100 mg. dried aluminum hydroxide gel
150 mg. magnesium trisilicate

If it doesn't work in a week, forget i

But please don't forget this:

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. Patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Painful Shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

(6) 46-070-8

For complete details,
please see full prescribing information.

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Division of Geigy Chemical Corporation
Ardsley, New York 10502

Butazolidin® alka Geigy

Capsules
100 mg. phenylbutazone
100 mg. dried aluminum hydroxide gel
150 mg. magnesium trisilicata

BU-6210

The Divorced Depressive: "Forty, Forgotten

"Had a large wedding."
"Had a fine home and family."



TO-5757

.Forlorn"

"Had a divorce."
"I'm a real loser,
and so are
the kids."



in depression

The loss of marital compatibility results in nearly 500,000 U.S. divorces each year.

Depression characterized by untold guilt feelings, grief and loneliness may follow.

When you diagnose depression, Tofrānil may be indicated for relief.

As maintenance therapy during the active phase of depression, Tofrānil can often help prevent relapse.

The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated. In patients with cardiovascular disease, thyroid disorders, increased intraocular pressure; in those receiving anticholinergics (including antiparkinsonism agents), thyroid medication or antihypertensive adrenergic neuron-blocking agents; and in those in their first trimester of pregnancy – the special precautions listed in the Prescribing Information should be carefully observed.

Toxic reactions severe enough to require discontinuation of Tofrānil are uncommon. However, for complete details, please refer to the complete Prescribing Information.

Turn page for brief summary of Prescribing Information.

Tofrānil® imipramine hydrochloride
Geigy

in depression



Tofrānil® Geigy

imipramine
hydrochloride

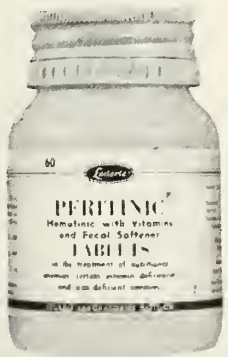
Tofrānil®, imipramine hydrochloride
Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of this agent and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before this drug may be substituted. Initial dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, it should not be used during the first trimester of pregnancy. Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy. Because of its anticholinergic effect, caution should be observed in prescribing the drug for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when this compound was added to the regimen. Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 years of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, disturbances of accommodation, sweating, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and disorientation), activation of psychosis in schizophrenics and agitation (including hypomanic and manic episodes) which may require dosage reduction and/or addition of a tranquilizer or temporary discontinuation of the drug, epileptiform seizures, orthostatic hypotension and substantial blood pressure fall in hypertensive patients, purpura, transient jaundice, bone marrow depression including agranulocytosis, sensitization and skin rash including photosensitization, eosinophilia, and mild withdrawal symptoms on sudden discontinuation after prolonged treatment with high doses. Occasional hormonal effects (impotence, decreased libido, and estrogenic effects) may be observed. Atropine-like effects may be more pronounced (e.g. paralytic ileus) in susceptible patients and in those using anticholinergic agents (including antiparkinsonism drugs).
Outpatient Adult Dosage: Initially, 75 mg. daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)R-46-850-C

For complete details, please refer to the full Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

TO-6757

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PERITINIC®

Hematinic with Vitamins and Fecal Softener

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● Elemental Iron (as Ferrous Fumarate)	100 mg
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Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

* anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. Now isn't that a good idea in an iron-containing hematinic?

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Just one tablet at bedtime • Prevents painful night leg cramps • Permits restful sleep

How many of your patients stamp their feet at night and lose sleep because of painful leg cramps? Unless prompted, they usually fail to report this distressing condition and suffer needlessly.

One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

Prescribing information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144



Nothing else I've tried seems to work, so I decided to give you a crack at it.

Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

And let you control the dosage.

With Novahistine LP tablets and Novahistine Singlet tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever.

Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

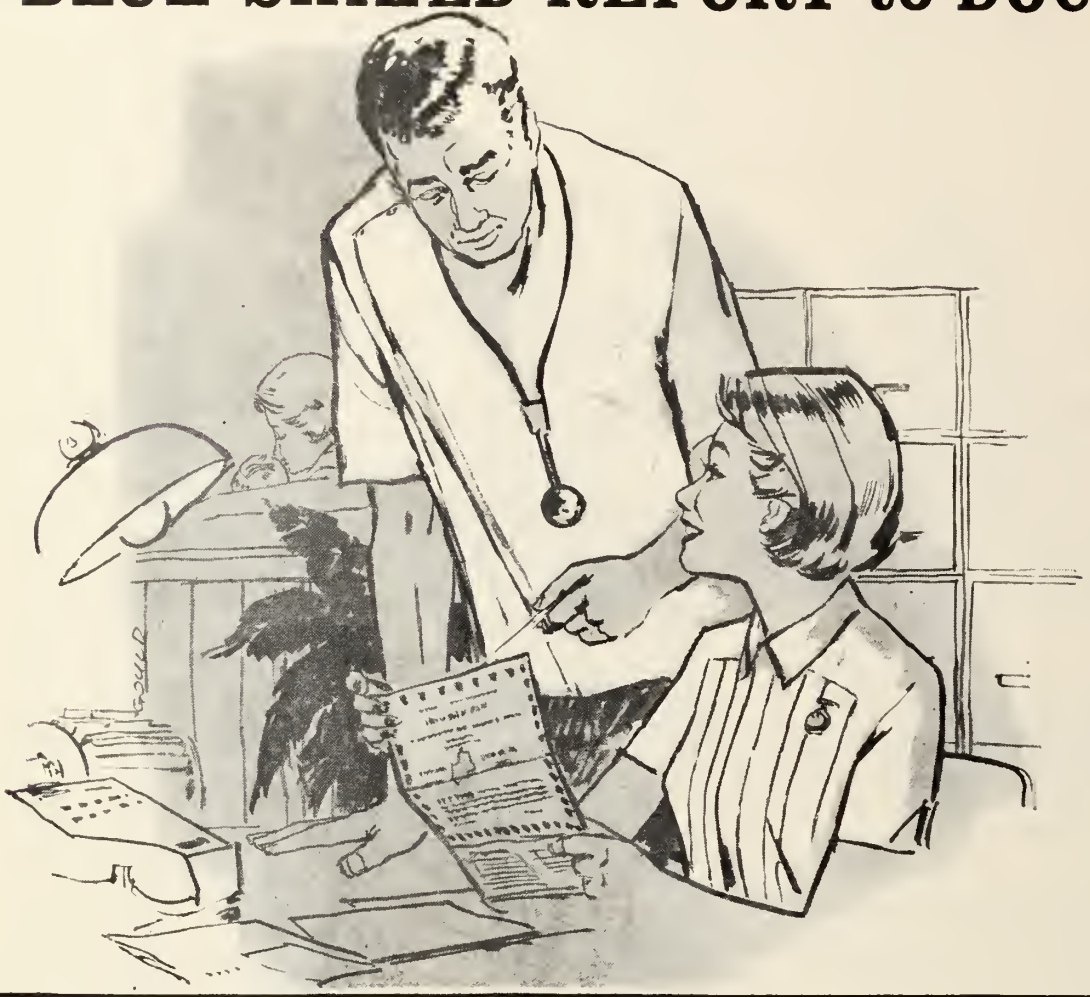
Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg., chlorpheniramine maleate, 8 mg., and acetaminophen, 500 mg.



DOW PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS

A BLUE SHIELD REPORT to DOCTORS



REPORT # 18

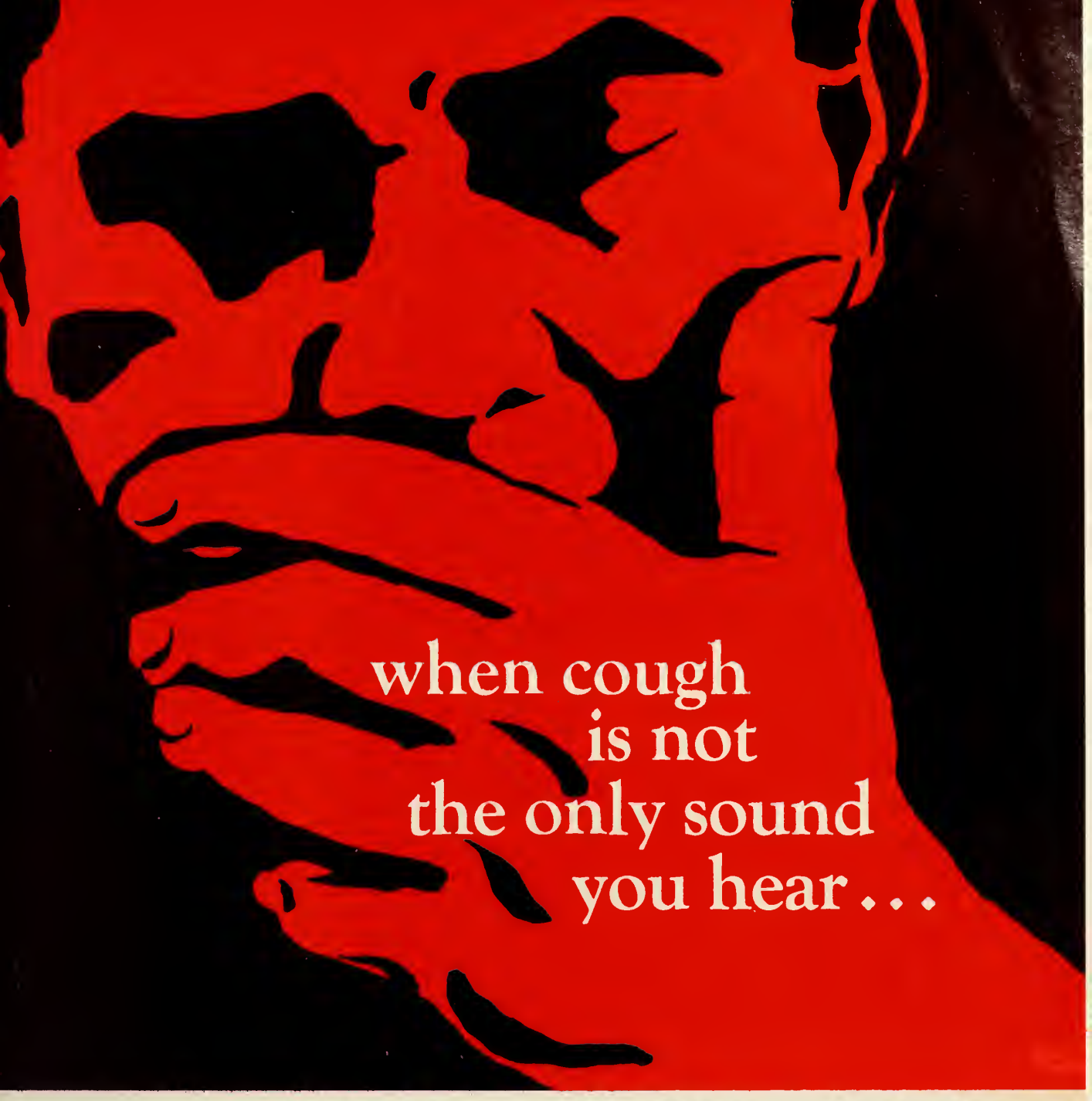
Correct Contract Numbers Necessary To Process Claims Promptly

In order to insure the prompt processing of claims, please be sure that the patients' current Blue Cross-Blue Shield contract numbers are shown on Part 1 of the Blue Shield claim form.

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OMNI-TUSS® b.i.d.

. . . **because** OMNI-TUSS is indicated for cough associated with upper respiratory tract infections, bronchitis, bronchiectasis, bronchial asthma, emphysema, sinusitis and rhinitis, hay fever, or other allergic conditions. Any of these conditions may exhibit the general symptom syndrome—coughing, wheezing, bronchospasm, and tenacious mucus—which may benefit from the antitussive, bronchodilative, antihistaminic, and expectorant action of Omni-Tuss.

The therapeutic usefulness of Omni-Tuss is enhanced by a unique resin complex formulation providing the clinically desirable advantages of: (1) uniform drug availability throughout an extended period, (2) 8 to 12 hours of symptomatic control, (3) minimal dosage requirement, (4) minimal side effects.

Economical, efficient **b.i.d.** dosage—extremely well-tolerated by children, 6-12, and adults.

'Omni Tuss' Suspension: Each teaspoonful (5 cc.) contains 10 mg. codeine (Warning: May be habit-forming), 5 mg. phenyltoloxamine, 3 mg. chlorpheniramine, 25 mg. ephedrine, all as cation exchange resin complexes of sulfonated polystyrene, and 20 mg. guaiacol carbonate.

Available on prescription only. Class X exempt narcotic. Permissible on oral prescription.

Dosage: *Adults:* 1 teaspoonful (5 cc.) q12h.
Children (6-12 *years*): ½ teaspoonful q12h.

Side Effects: Minimal, but when encountered may include jitteriness, nausea, drying of mouth, insomnia, constipation, which disappear upon adjustment of the dose or discontinuance of treatment.

Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

Strasenburgh

Strasenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N.Y.

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your patient can feel better while she's getting better

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Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In tetracycline-sensitive bacterial infection complicating respiratory allergy, ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

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Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle

927-8

now she can cope...

thanks to

Butisol SODIUM®
(SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated. BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg. (¼ gr.), 30 mg. (½ gr.).

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa.



It's almost as if you were there to give an injection of penicillin



V-Cillin K®, Pediatric dependable oral penicillin therapy

Potassium Phenoxymethyl Penicillin

Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K® (Potassium Phenoxymethyl Penicillin Tablets, U.S.P.), 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K® (potassium phenoxymethyl penicillin, Lilly), Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567A] 800198

Additional information available to physicians upon request.

Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

The Journal
of the
Maine Medical Association

Volume Fifty-Nine | Brunswick, Maine, November, 1968 | Number 11

Physician Assistants: Their Role in Medicine in the Years Ahead*

Russell H. Morgan, M.D.**

My talk to you this evening addresses itself to one of the major problems which faces American medicine: How can the clinical services demanded in ever increasing amounts by a seemingly insatiable public be met in the years ahead by a medical profession that is badly overextended? There are many possible answers to this question. However, before proceeding to a discussion of them, I believe that it might be well for us to examine the history of the last few years so that we may have a better perspective of the position of medicine in today's society and why this position has developed in the way that it has.

I. The Medical Manpower Problem

I suppose that if there is a time when one can pinpoint the beginning of the modern era of American medicine it was the year, about a half century ago, when the Flexner report was published. This report called attention to the deplorable state of American medical education at and just beyond the turn of the century. Many medical schools provided little or no laboratory experience in the basic sciences. Others limped along with clinical staffs that were so inadequate that the graduating students were left with an education so devoid of fundamentals that successful practice as judged by even the lowest of standards was well nigh impossible. Flexner found a distressing number of schools with no academic affiliations and following practices that made it quite clear that they were little more than diploma mills.

Of course, the situation was not uniformly bad. By 1900, a number of universities had established medical schools in which the standards adopted for their students were the same as those that applied to graduate students generally. For some, a college degree was a prerequisite for admission. A few introduced the full-time philosophy for both their basic science and clinical faculties. Many schools involved the students in laboratory exercises and clinical clerkships.

Flexner found that the quality of the students graduating from these latter schools was so enormously better than that of the graduates from schools less well situated that major portions of his report were devoted to a plea to those in charge of American medical education to outlaw schools with major deficiencies and to set high standards of accreditation for all.

America seemed ready for the Flexner report. At least, its impact was profound and by 1930 most of the substandard medical schools of this country had been weeded out. The improvement in the quality of graduating students was apparent to everyone; there was no question that the changes brought about by the Flexner report represented a long step forward in American medical education and the provision of quality health care to the public.

One outcome of the changes, of course, was a diminution in the number of physicians graduated annually. It was anticipated that this loss might soon be made up by the establishment of new schools embodying the new standards of excellence. However, medical schools with such qualifications are expensive to operate and hence, few materialized during the 1940's and 1950's. Indeed, the number of medical students who graduate each year per million of population in the United States has remained essentially constant from 1930 until the present day.

The characteristics of medical practice and of Ameri-

*Presented at the 1968 annual session of the Maine Medical Association.

**Radiologist-in-Chief, Department of Radiology, The Johns Hopkins Hospital, Baltimore, Maryland 21205.

can society, however, remained far from constant during this period. Consequently, the equation relating the demands of the people for clinical services on the one hand and the amount of medical manpower to meet these demands on the other has become badly distorted. Such congressional action as the Economic Opportunity Amendments, the Medicare Act and the Heart, Cancer and Stroke Legislation have placed and will continue to place an increasingly heavy burden on every physician. The large number of insurance programs available to the population is having a similar effect. Unfortunately, many types of medical care insurance and almost all of the government programs in medicine have characteristics that promote inefficiency and excessive utilization of medical services by the population. Having made payments for health care, many individuals feel that a call upon a physician is justified no matter how trivial the complaint. Since the costs of medical care are hidden from view, many physicians also feel few restraints when ordering laboratory and x-ray examinations in our hospitals.

In these times when circumstances have combined to increase the people's demands for clincial services and to promote inefficiencies in the provision of these services, it is perhaps fortunate that a number of other factors have prevailed to keep the medical supply-demand equation from getting completely out of balance. The antibiotic revolution has certainly operated to diminish morbidity in a whole host of disease states. The trends toward group practice have without question increased the efficiency and effectiveness with which medical care is provided the public.

Nevertheless, the net effect of all of the social, economic and medical changes which have taken place in the last 30 or 40 years has been to increase disproportionately the demands for clinical service in the United States compared to the growth of medical manpower. If proof of this is needed, one need only turn to statistics on the cost of medical care per capita. In recent years these costs have risen much more sharply than the cost of other services. This would not have taken place if the medical supply-demand equation had been kept in balance. Another piece of evidence in support of this thesis is the increasing number of physicians in general practice, or in practice as internists and pediatricians, who are closing their offices and returning to university hospitals for residency training in such disciplines as laboratory medicine, ophthalmology, psychiatry and radiology. For these people, the tensions and pressures of medical practice have become so great that an escape to some apparently less demanding field must be undertaken. A recent Public Health Service report by the National Advisory Committee on Radiation presented data to indicate that more than one-third of all of the physicians taking residency training in the field of radiology today are individuals who have been in practice in some other discipline and have elected to leave this practice for a field that seems less strenuous.

II. Solutions to the Imbalance Between Clinical Demands and Available Physician Manpower

With the supply-demand equation getting further and further out of balance each day, we come face to face with the problem of what to do about it. Clearly, if something isn't done, the whole American system of medical practice will be in serious trouble with forces other than those within the medical profession itself dictating the mechanisms by which medical care is provided in the future. The achievements of American medicine both in terms of the excellence of its training programs and the manner in which medical discovery has been adapted for clinical benefit have been so great that it would be a shame to see them jeopardized by our inability to find a solution to the worsening medical manpower problem.

One solution to this problem that has received increasing attention in recent years is the enrollment and subsequent graduation of increased numbers of medical students. If this can be done without sacrifice of quality, it is certainly a solution that should be pursued with all possible vigor. However, it should be pointed out that the pipeline of American medical education is so long that even if one were able to increase the enrollment in American medical schools by 50% next year, it would be a long time before its effects could manifest themselves. Four years of medical school, one year of internship, an average of two or three years of post-doctoral training plus two years of military service remove us at least ten years from any change in the physician manpower pool. Actually, the time when any noticeable change in physician manpower might be expected to occur is much more distant. Indeed, simple arithmetic will show that an increase of 50% in the number of medical students enrolled today will not yield a substantially larger manpower pool until the year 2,000.

Some people have advocated that the educational pipeline be shortened by the elimination of two years of college and the absorption of the internship into the last year of medical school. This would shorten the time between high school graduation and entry into practice by three years. The impact of such a proposal on the quality of American medical education if it were adopted is difficult to judge. Since this proposal not only shortens the educational pipeline but also increases the number of years of practice, it appears worthwhile to establish experimental programs embodying its principles in a number of American medical schools to determine if the plan does materially impair the excellence of American medical graduates. Perhaps, by a combination of shortened vacation periods and improvements in teaching techniques, three years of the educational process beyond high school can be eliminated without noticeable loss of quality among the graduates.

Another suggestion that has been made to increase the availability of physicians, particularly in less populous areas, is the requirement that every physician spend

two or more years in general practice shortly after graduation. This suggestion does not seem to be operationally feasible. However, even if it were, the results would likely be disappointing. There are currently 70,000 physicians in general practice in the United States. Also, slightly more than 8,000 medical students graduate each year from American medical schools. It is therefore clear that unless a great many of these graduates could be persuaded to remain in general practice, their impact would be small. Furthermore, their loss to the specialty fields would create new problems fully as serious as the old ones they solved.

III. The Physician Assistant

Much has been said in recent years about the training of a new type of individual who, if graduated in large enough numbers, might be able to bring the medical supply-demand equation more in balance in a relatively short period of time. This is the physician assistant, a man or woman educated from four to eight years beyond high school graduation who is able to assume some and perhaps many of the responsibilities now carried out only by doctors of medicine. The idea of the physician assistant is not new of course. In times when medicine was not as complex as today, the nurse often served as a physician assistant both in the home and in the hospital. In recent years, such physician-nurse relationships have diminished as medicine has become more complex. However, there can be little question that a well-trained individual, even though educated to a level below the M.D. degree, can assume much responsibility in the care of many patients. As an illustration of this, one need only turn to the extensive use of corpsmen as physician assistants in the military services.

It perhaps should not be surprising that the physician assistant, educated to a level midway between the nurse and physician, has been proposed as a possible solution to the medical manpower problem. It currently requires an average of eleven or twelve years of education beyond high school for an individual to obtain an M.D. degree and to qualify himself for practice in one field or another. On the other hand, most of the nursing and technological personnel at work in hospitals today are educated but two or three years beyond high school. It is apparent that there is a large educational gap between the M.D. on the one hand and most nursing and technological personnel on the other. As long as this gap continues to exist, there will be no great opportunity for physicians to delegate many of their responsibilities to others. However, if it were possible to take individuals of above average intelligence and motivation, and perhaps who have had some college education, and to supplement this with several years of intensive medical education and clinical experience, there is the possibility that such individuals could become extremely valuable components of the medical team.

At the end of their training, such individuals might be given a bachelor's or master's degree in medical science (i.e., a B.M.Sc. or M.M.Sc.). They could be used extensively in many of our hospitals to fill the vacancies in house staff quotas. I suspect that they might be able to perform as effectively as many of the foreign graduates who come to our shores and deplete the physician manpower reserves of the countries from which they come.

The usefulness of these graduates need not be limited to hospital functions. Under the supervision of a physician, they can assume much responsibility in group practice, in the office and in the home. Moreover, there are a few specialties where the physician assistant would have no place.

Training programs for physician assistants are under development at a number of centers. One, established at Duke University in 1966 is particularly interesting. This program has been designed to provide career opportunities in both clinical and research medicine for men and women who are to perform certain carefully defined services, reliably and responsibly, under the supervision of a physician. In patient areas, the student learns to draw blood, start and regulate intravenous infusions, intubate the gastrointestinal tract and do other procedures usually performed by a physician. He is trained to monitor vital signs, give medications and keep progress records, skills conventionally performed by nurses. The student is also taught to operate certain diagnostic and therapeutic instruments including electrocardiographic equipment and respirators as well as to carry out routine laboratory studies often done by technologists. In short, the new program attempts to train individuals in broad areas of physician support.

The new program has established the following minimum admission requirements:

1. A high school diploma or its equivalent, with courses in chemistry, algebra and biology.
2. Experience in the health field (for example, as a corpsmen or licensed practical nurse).

Academic accomplishments and experience in the health field are reviewed carefully before admission. Those in charge of the program state that the experience requirement has been introduced because the curriculum presupposes prior learning in the health field.

Progress through each phase of the training program is carefully monitored by the faculty at Duke. Further evaluations are based on written and oral examinations. The trainee is finally certified as a physician assistant at the end of two years upon successful completion of all preclinical and clinical work and the attainment of passing scores on written, oral and practical examinations.

The preclinical curriculum includes 144 hours in anatomy and physiology, 60 hours in metabolism, 190 hours in a course entitled, Introduction to Clinical Medicine, and 60 hours in a course on Recovery Room Practices. One hundred and fourteen hours are spent on physical diagnosis and 92 hours in animal surgery. Courses in pharmacology, laboratory medicine, psychosomatic medicine and electronic instrumentation together account for 210 hours of work.

The foregoing courses are given in one year. They are followed by a clinical year which includes supervised exercises in the Duke Medical Center and affiliated hospitals and clinics. During this time, the student gains experience in inhalation therapy, emergency room practices and pulmonary function techniques. Time is also spent in the electronic instrumentation shop.

The Duke program is interesting. However, it is but a beginning. Training programs need to be developed to meet the special requirements of such fields as Laboratory Medicine, Psychiatry, Radiology and the divisions of Surgery. For many of these, the curriculum will be more demanding and require more stringent standards of admission, often including a baccalaureate degree in one of the sciences. The curriculum of a physician assistants program in Radiology, for example, might include the regular medical school courses in Anatomy, Physiology and Pathology followed by intensive work in Radiological Interpretation. After two years of work and the granting of a Master's degree, the graduates of such a program could be expected to perform, under a radiologist's supervision, many of the functions heretofore carried out only by a radiologist. It is not difficult to envisage the development of similar training programs to meet the needs of other specialties.

So great is the potential value of a physician assistant in relieving some of the onerous burdens of an overloaded medical profession that experimental programs should be instituted on a broadening scale. The purpose of these programs should be to evaluate the effectiveness of well-trained physician assistants, to determine the curriculum requirements of the training programs, and to establish the criteria for graduation.

In addition, the matter of licensure for these individuals should be explored extensively. Certainly, their professional status must be clearly identified for the protection of the public and of the members of the medical and paramedical professions. Notwithstanding the large amount of effort that must be expended in the development of physician assistant training programs, I sincerely believe that they represent a solution of major importance to the imbalance between the increasing demands for clinical service by the public and the availability of medical manpower to meet these demands. If developed properly, the concept in no way poses a threat to the excellence of medical practice as known in the United States today. Indeed, on the contrary, it seems to be one of the important ways by which this excellence can be maintained well into the future.

IV. Where Should the Physician Assistant Be Trained

We come now to the question of what type of institution is best able to provide the training for the broad range of physician assistants that are needed. Is it the junior college? Is it the large general hospital? Or is it the medical school?

As far as junior colleges are concerned, there is no question that many have undertaken quite successfully the education of many types of paramedical personnel. However, it appears that junior colleges have two principal drawbacks. In almost all cases, they do not provide a medical environment for study. Hence, maximal motivation and stimulation of the student are not attained. Of even greater importance, the credits that a student achieves in many junior colleges are not transferable to institutions of higher education. Consequently, if a student completes work to a given level in a junior college and later wishes to advance to a higher level through additional education, the student is forced to start at the beginning when new work is undertaken.

In regard to training programs in large general hospitals, the chief difficulty is the assembly of a faculty of adequate breadth and strength to meet the programs' objectives. Although certain areas may be well covered by the attending physicians of the hospital, other fields are frequently provided with quite inadequate instruction.

On the surface, medical schools are perhaps the best qualified to undertake major educational programs for physician assistants. They provide the necessary medical environment. They should also be able to develop a curricular structure such that a student may progress to whatever level he or she desires, with work completed at one time being readily used to support additional education in the future if higher goals are sought.

One difficulty that medical schools face in assuming responsibility for physician assistant education is that these schools in the past have had a very limited mission. They have concentrated entirely on physician education and hence may be unwilling to broaden their responsibilities to include the education of individuals to levels less than the M.D. degree. Until now, this concentration of interest has unquestionably had its value. It is responsible in no small part for the high quality of physician education in the United States today. However, with the very serious manpower problems which face us, I thoroughly believe that the time has come for our medical schools to take a major step forward – the first major step since the Flexner report. This step involves the assumption of responsibility for medical education at all levels. It is a step that will require a restructing of present patterns in medical education so as to make available a broad spectrum of educational opportunity for all who may wish to work in the health sciences.

In a sense, I am proposing the replacement of the medical school as it currently is constituted with a complex of facilities which will provide practical, baccalaureate and master's training as well as doctoral education. To furnish this breadth of training, it may well be necessary to divide a medical school into several sections; that is, into a series of medical colleges, each with specific program objectives but with overlapping faculties to achieve maximal coordination of the several units.

The broadening of the educational responsibility of

our medical schools will indeed constitute a major step, not only enlarging the scope of these institutions to include the training of physician assistants but also to provide education for nurses and all other paramedical personnel. It is a step that must be taken, however, for no other institutions are so well equipped academically to accomplish successfully such an enormous undertaking.

This brings me to a word about the situation here in Maine. For a number of years, Maine has had no medical school. However, there is a substantial number of physicians within the State who have urged that a program for the training of physician assistants be undertaken at the earliest possible time at the University of Maine or at one of the excellent colleges which dot the State. There is little question that the State faces serious problems from shortage of medical manpower. If therefore appears that Maine has an excellent opportunity to take the leadership in the development of a new kind of medical school in which the first building blocks constitute one or more of the pre-doctoral units needed to provide practical, baccalaureate and master's education for physician assistants, nurses and other paramedical personnel. If this can be accomplished, a move can then be made to develop a school for doctoral candidates, perhaps with emphasis on the education of men who will enter general practice. When this is done, Maine will have one of the first educational centers in this country where comprehensive medical education is provided. It is an enormous challenge; it involves much work. However, when the job is done, Maine will not only be a leader in medical education but will have taken the major steps necessary to achieve an adequate supply of medical personnel at all levels and to correct the serious shortages which now exist. Although the demands on those who formulate and develop this educational program may be great, the rewards in terms of accomplishment will be substantial. I am certain that the endeavor will be successful once a decision is made to embark upon it.

AMA SERVICE BRIEFS

Following the enactment of the Comprehensive Health Planning Act (Public Law 89-749) in November, 1966, the House of Delegates of the American Medical Association adopted a report which defined the role of the medical profession in comprehensive health planning and urged state and local medical societies to participate vigorously in the program. It concluded that planning, organization, and distribution of health facilities and services are a prime responsibility of organized medicine.

Along these same lines, the AMA Council on Rural Health and its Advisory Committee agreed upon the following observations regarding community health planning during a recent meeting held in Chicago:

a) Present resources to aid in community health planning include the Comprehensive Health Planning Act, Public Law 89-749, regional medical programs, and inherent community resources such as current health programs, health facilities and personnel and recognized planning groups.

b) The need for community health planning in rural areas is urgent because of the maldistribution of health manpower, limited health facilities in sparsely populated areas, duplication of agencies and programs, and inefficient utilization of health manpower and facilities.

c) There is need for development of innocative ways to utilize present health manpower.

d) The health team approach with its use of allied health professionals to assist the physician will expand the availability of health services in many rural areas.

e) The role of national organizations concerned with the health of the rural population should be defined, and effective communication established, with respect to rural community health planning.

f) Task forces on comprehensive health planning should establish a structure to deal effectively with the rural sector of the population.

g) Resources should be made available for development of local or area planning councils to help in the development of planning for the sparsely populated rural areas.

The Council on Rural Health is prepared to provide information and advice to rural groups interested in becoming actively involved in the vital area of health planning. Inquiries should be directed to the Council, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610. — **News Release from the American Medical Association, No. 20, 9/68.**

Physician Assistants: A Threat or a Challenge?

JOHN D. DENISON, M.D.

In recent months, popular magazines, as well as medical journals, have had a plethora of articles describing a pending disaster for medicine because of the shortage of doctors. At least, doctors are so distributed that fringe areas like the rural parts of Maine have a serious shortage. Dr. R. H. Morgan's challenging paper on Physician Assistants, which appears in this number of the Journal of the Maine Medical Association, should command the attention of all who are concerned about the future quality and availability of medical care. His proposals would have a far-reaching effect on medical practice as we know it today, and physicians in particular should be concerned about this.

The value of corpsmen in the military services, and of similar individuals in larger hospitals is without question. However, Dr. Morgan now proposes a much more sophisticated person trained in a medical school. Such training programs have already been started in North Carolina and in Colorado. There is no doubt a need for an increased use of corpsmen or orderlies and other paramedical personnel in the larger hospitals. We should, however, have reservations about the use of such high-caliber individuals as Dr. Morgan proposes, and about using medical school resources to train them. It is suggested that physician assistants be recruited from those of above-average intelligence and motivation, with some college education and perhaps with a baccalaureate degree in one of the sciences. This is fine, but it would seem that these are the very people who should be trained as fully-fledged physicians. Can we reasonably expect such assistants to remain satisfied to perform only simple routine tasks? Is it not probable that they would soon be trying to convince the committees of our legislature that they should be licensed to do more and treat certain injuries, such as industrial accidents, because like the doctor, they too went to medical school? Let us beware of creating a new version of an old problem. There is no substitute for the qualified physician or for the standards which his degree and license to practice represent. The number of physicians a medical school can train is, we are told, limited largely by the amount of laboratory space available for teaching basic sciences.[1] The physician assistant's training as outlined would require the use of the same facilities. If they can be trained in medical schools without a reduction in the number of regular medical students, then one might reasonably wonder why, with a little extra effort, the number of medical students could not be increased instead.

If we look specifically at the needs of Maine, it is hard to see how a physician assistant could contribute very much towards the needs of some of our small rural communities. Even the anticipated increase in the use of electronics and communications media cannot replace the traditional doctor-patient relationship. Maybe our bigger centers will use increasing numbers of highly trained technical personnel for sophisticated procedures. But we must not lose sight of the fact that a great many more lives can be saved by the prevention, or at least postponement, of disease. This work belongs right in the doctor's office, and its acceptance by the patient is based on a proper relationship with the doctor himself. Physicians may be losing their identity as only one group in the "health professions"[2], but in the final analysis when a patient is sick he wants the doctor, not the nurse, not the technician, and surely not his non-M.D. assistant. The needs of rural Maine will only be met by an increase in the number of practicing physicians. These must be complete physicians, capable of taking care of simple every-day illnesses as well as alert to the needs of disease prevention and the building up of positive health in the population.

The Maine Medical Association has already made a magnificent effort through its Maine Medical Education Foundation to help make it possible for more Maine students to go to medical school. It is now time to carry this effort one step further. We now need an even greater effort to see that these students, and hopefully many more like them, come to Maine to practice. This will call for the acceptance of new ideas, and probably changes in our own methods of practice. It is not enough to merely extoll the advantages of living in Maine. Not everyone lives for hunting and fishing. That we must be able to offer hospital privileges is self-evident, but these must be in modern hospitals large enough to offer all the latest in technical advances. We must also give serious thought to an expansion of group practice, even on a regional basis. Only in this way can we offer the young physician the security he must have in the conduct of his practice as well as financially. We must formulate a sound plan on where the real need for physicians are. To merely maintain a list of those communities that would like a doctor is not enough. Who knows whether such places can really support a doctor? These communities need to be evaluated as part of a region. Is there a plan for coverage with near-by physicians? Is there a regional plan for consultations and referrals on a realistic basis that the patient can afford? Such a plan will require a detailed survey on a local level as well as planning on a regional and state level. Maybe this is a task in which the Maine Medical Association can work in close cooperation with Maine's Regional Medical Program.

If we are unable to meet our physician needs, there are three particular areas to be considered before em-

bracing a plan for physician assistants. The first is whether the medical school is the right place to train him. This could be a waste of a valuable resource and perhaps the job could be just as well done by our hospitals. Next, we must consider carefully the effect the physician assistant will have on the medical profession as a whole. We must not allow a decline in the quality of medicine itself or the standard of ethics under which it is practiced. The requirements for licensing such people must be carefully delineated and preferably under our control.[3] Finally, we must not allow the availability of physician assistants to divert our efforts from the need to attract more real physicians even in the rural areas.

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Physician Assistants: More Problems or Less?

Linus J. Stitham, M.D.

When I first heard Dr. Morgan's thesis at the Maine Medical Association meeting in June, my initial reaction was quite visceral. Second thoughts upon reading the paper and being asked by the Editor for comments, make my reaction no less visceral but perhaps more considered.

Primarily I fail to accept his major premise that there is indeed a true shortage of physicians. I feel the problem to be rather a case of maldistribution of physicians and, if you will, at least from the patients standpoint, a resultant misuse of talent.

If we are concerned about basic front line medical care we must be speaking of the general practitioner. Whether admitted or not by the hierarchy of medicine, we already have two classes of physicians . . . the specialist and the generalist. Certainly, except in a very few specialties such as anesthesia and psychiatry, there exists no real shortage, therefore what we need are generalists and it seems to me our efforts should be directed towards producing them rather than devising a third class of physicians or the so-called physician assistants.

While I feel there is no question but what some trained physician assistants are needed in the larger centers to operate the ever more complicated therapeutic and diagnostic apparatus, the idea of training large numbers of such people and turning them loose on the public is to me most upsetting.

At least the two existing classes of physicians have had the same basic medical training or did until very recently when now a few schools are allowing a man to take almost entirely electives and thus determine the direction of his future in medicine very early in his career.

To me the logical solution to any physician shortage is so simplistic that it probably defies implementation, namely the requirement by all specialty boards that anyone wishing to become a board member must first spend a prescribed period of time in general practice – either two or three years. This is dismissed in Dr. Morgan's paper by one sentence: "This suggestion does not seem to be operationally feasible." I submit that while it certainly would be a considerable violation of individual freedom, it would, once accepted, be far more feasible and less difficult than attempting to resolve the multitudinous problems that would be raised in attempting to define the role, training and licensure requirements of a so-called physician assistant.

Such a requirement by specialty boards would have two beneficial effects besides the immediate one of providing care for the patient on the family level. First, a few of these men, I suspect a larger percentage than might be expected, could well find the life of a general practitioner worthwhile and would continue in this field. Secondly, even if the vast majority eventually went on into specialization, they would become that much better a specialist for having been a lowly L.M.D.

To avoid a complete hiatus in the specialty ranks during this two or three-year period it would probably be necessary to have a certain percentage of the men gain their general practice experience after one or two years of specialty training. Although I am tempted to observe that even if there were a two or three-year period with no specialists produced it might not necessarily be a tragedy as far as the public is concerned.

Further suggestions that could result in producing more generalists might be to persuade some of the existing medical schools through standard "carrot and stick" government grant techniques to concentrate on training generalists.

For a country as rich as ours it would not seem impossible to establish some new schools by a crash program. These need not be complete with every last word in research and/or facilities and therefore prohibitive in cost.

An additional suggestion would be to open medical

school admissions to all interested and appropriately intelligent students whether or not they are scientifically oriented. I have observed that although the medical schools render lip service to desiring the "well rounded" student, in actual fact woe be unto the liberal arts graduate applying who, for example, does not have umpteen chemistry courses which he will rarely use in medicine unless going into research. How much better a generalist could be the student who had been grounded in history, philosophy and the humanities . . . who might well be more likely to bring to his patient the compassionate understanding often lacking in the analytical and scientific (albeit necessary) approach employed by many specialists.

One of the more obvious drawbacks to the idea of physician assistants is indicated by Dr. Morgan's own words. He suggests that if it were possible to "take individuals of above average intelligence and motivation, and who have had some college education that these individuals with further training could become extremely valuable components of the medical team." I would suggest that if they were of above average intelligence and motivation why not make it possible for them to become M.D.'s. Moreover I cannot envision many with this type of ability and the proposed training who would be satisfied to remain in such a low position on the medical totem pole. It would seem to me that any physician assistant as in Radiology, for example, who had taken regular medical school courses in Anatomy, Physiology and Pathology, possibly having a Baccalaureate degree in one of the sciences would not be satisfied to remain long in such a role.

In his attempt to make his paper topical, Dr. Morgan refers to a "substantial number of physicians" within the State who have urged that a program for the training of physician assistants be undertaken at some in-state college. While the existance of such a "substantial number" is news to me I would hope we might be able to identify them and solicit their help in discussing and hopefully solving this and other related medical problems in Maine.

While I can accept the need, even perhaps the desirability of some type of physician assistant to work in the hospital and perhaps in some of the larger clinics or groups, I cannot conceive of them being adequate to practice medicine as I feel it should be practiced in rural areas.

Even with all the advances in transportation, even envisioning the use of regional hospitals with outlying helicopter service, while this might provide ideal mechanical care for the patient it is still not the type of care those in the rural areas really need or more particularly want. What these patients desire primarily is their own doctor, one who is familiar with their own problems and physically present in their community. I do not feel this role can be filled by some type of glorified combination public health-midwife-first aid man or woman as, for example the feldsher now being used in Russia. Nevertheless, Dr. Morgan is to be highly commended for the time, effort and thought involved in his provocative paper. It is only by the free exchange and discussion of ideas that progress comes in this or any other area.

It is a truism which is rapidly becoming trite to say that we in medicine have for far too long, buried our heads in the sands of our own practice and abdicated our responsibility to provide answers to medical problems to the professional do-gooders, economists, sociologists and other fringe paramedical people . . . the hour is late.

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AMA SERVICE BRIEFS

September marked the introduction of the **AMA Mental Health Newsletter,** which — as stated in the first issue — is intended to act as a "**bridge** between (1) the Department of Mental Health, the Council on Mental Health and the Committee on Alcoholism and Drug Dependence of the AMA and (2) members of committees in state medical societies which are concerned with mental health, alcoholism and drug abuse."

Local legislative efforts, training programs, workshops and conferences are among the topics to be reported, with emphasis to be placed on those ingredients responsible for the success of the various programs. This emphasis will enable other states to benefit from the ideas to an even greater extent. The frequency of publication of the complimentary newsletter will be determined at a later date.

Mental health committees of state medical societies, committees on alcoholism and drug abuse, commissioners in the mental health field, etc., will receive new issues as they are developed. Anyone else expressing interest in this subject and wishing to be added to the mailing list should contact the Department of Mental Health, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610. — **News Release from the American Medical Association, No. 20, 9/68.**

Depressions in the Elderly

FRANK S. BROGGI, M.D.*

Originally this author intended to entitle this paper, "The Treatment of Senile Depressions." The term Senile Depression has the connation to a majority of medical men of a depression occurring in senile or elderly persons, probably due to a multiplicity of extraneous factors, such as Cerebral Arteriosclerosis, Senility and physical disabilities of various sorts. These factors cause the patient to realize he has marked limitations in making either a satisfactory occupational or social adjustment.

This paper is directed to the depressions occurring in those elderly people who are chronologically old, but not senile at all! In these patients "the mind does not age at all but only the body undergoes the degenerative changes that are to be expected in these individuals." They have a "lusty mind trapped in an old rickety body." Too many of these elderly people are incorrectly diagnosed as suffering from a Chronic Brain Syndrome with Cerebral Arteriosclerosis and committed to State or private mental institutions. Actually, the type of patients in mind are those suffering from Endogenous Depressions, the same type that is seen in younger people.

These errors in diagnoses are being made by general practitioners, internists, and psychiatrists. Several years ago a medical colleague of mine brought his father to me, who had been diagnosed in a large city by a competent board certified psychiatrist as suffering from a Chronic Brain Syndrome with Cerebral Arteriosclerosis. The recommendations were that he be placed in a private mental institution for an indeterminate length of time. The prognosis in this case was guarded. Actually, it was thought to be hopeless. This 72-year-old man was suffering from a mild agitated depression. Following a few Modified Electro Therapy treatments he recovered and spent the next month or two in Florida, as it was in the winter months, where he enjoyed himself immensely.

Another patient, 68 years of age, in a State Mental Institution was diagnosed as suffering from Cerebral Arteriosclerosis. His family were advised that he should sell his home and convert all his assets into a trust fund, as it was stated that supervision in a nursing home would be necessary for his remaining years. It was also recommended that he have a guardian appointed. He was seen in a local hospital and a diagnosis of Endogenous Depression made. A course of Modified Electro Therapy was recommended but was refused by his sister who mistook this for "Shock Therapy" and felt it was too dangerous to be used in her brother's case. After one and one-half years this patient had a spontaneous recovery from his depression. Since that time, in the last two or three years, his guardianship has been removed, he has run for public office and was elected, and is intensely interested in the stock market where he has made some very shrewd investments.

A 78-year-old semi-retired druggist, who suffered from a subarachnoid hemorrhage in 1940, subsequently was treated with Modified Electro Therapy on four different occasions for recurrent depressive attacks with excellent results. His most recent course was given him this year at 80 years of age.

The oldest patient who has been treated at the clinic was an 87-year-old widow who was successfully treated for a depressive attack at 80 years of age. She had insisted upon being treated at 87 years of age as she had been told that if she ever had a recurrence she would again recover. Throughout the course this elderly woman had numerous complications. Following her first treatment her temperature went to 104°R, but the following day her temperature was normal. On every subsequent treatment she had a temperature elevation, but she eventually obtained a remission of symptoms. During the course of treatment she received Sparine®, 25 mg, 4 id, which caused a leukopenia. This, however, cleared up upon cessation of the drug.

In our experience these elderly people tolerate Modified Electro Therapy exceedingly well. The use of phenothiazines and anti-depressant drugs, if used in these elderly people, have to be used with extreme caution.

Without doubt, there are many more of these cases that are misdiagnosed; many of them suffering from agitated depressions, dying in hospitals of cardio-vascular failure or intercurrent disease. The reason for mentioning these cases is the marked difference in prognosis between the Chronic Brain Syndrome with Cerebral Arteriosclerosis and the Manic Depressive Syndrome. It has been thought for years that the differential diagnosis between the psychotic with cerebral arteriosclerosis and that with the cases of senility is that the cases of cerebral arteriosclerosis are characterized by remissions, whereas the senile psychosis is a gradual progressive mental deterioration. It is hard to rationalize how a generalized cerebral arteriosclerotic process producing psychosis could suddenly have a remission of symptoms instead of getting progressively worse.

The differential diagnosis between these two types of psychosis is usually not too difficult if one keeps the standard diagnostic criteria in mind. The cerebral arteriosclerotic is usually confused, disoriented and shows marked memory defect for both the remote and recent past. In the elderly depressive the sensorium is clear.

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They are not disoriented for time, place or person, and their memory is intact. If they are suffering from an agitated depression it may take more skill in recognizing them than is true of the simple depression. If a careful history is taken one often finds that these people have suffered from depressions in their past on one or several occasions or there may be a family history or mental illness, i.e., relatives who have been in mental hospitals and recovered or a history of one or more suicides in the family tree.

It has been our experience at the Maine Medical Center that these elderly depressives do very well on Modified Electro Therapy.*[1,2,3,4] In one series of 12,000 treatments 35% of the patients were 65 years or older. More than 35% of treatments have been given to this age group, as depressions in the aged seem to have a greater tendency to recurrence, in general, than those in the younger age group.

It has been a definitely established fact in handling depressive cases that if they recover once with Modified Electro Therapy and have a subsequent recurrence of symptoms one to ten or more years later they have a 100% chance of recovery with another course of treatment. This statement does not include those schizophrenics who show moderate temporary improvement to E.C.T. but have not actually recovered and who subsequently seem to derive very little benefit from E.C.T.

A substantial number of patients in their late 70's and early 80's have been treated with Modified Electro Therapy and shown good results.[5] From experience we have found that these patients have to be treated more slowly than the younger age group. Instead of administering the usual three treatments a week they are given three treatments in two weeks to avoid mental confusion due to the treatment. The number of treatments given depends upon the alleviation of the individual's mental symptoms, usually four to six treatments.

If these patients' depressive symptoms recur too frequently, they can be easily controlled by giving them maintenance therapy, that is, a treatment every month or two when they are well to prevent another depression.

After conferring with the Department of Anesthesiology and several Internists we do not believe there is any physical contraindication to Electro Therapy, unless a patient is in acute cardiac decompensation. In these cases, the treatment is not started until the patient is out of cardiac decompensation. The usual arrythmias should not necessarily prevent the use of Modified Electro Therapy, particularly if the patients' mental condition is such that it is aggravating his cardiac status.

Several years ago a 72-year-old widow with ECG findings of auricular fibrillation of long standing had been successfully treated ten years previously, and it was therefore strongly felt that she would benefit from this method of treatment. She was compensated and it was the opinion of the cardiologist with whom we consulted that it was advisable to go ahead with the treatment. She was extremely agitated, restless, and unable to sleep. As she had been treated successfully with E.C.T. ten years previously, a good mental response could be expected. She lived more than two and one-half years before succumbing to her cardiac condition, but died in a perfectly lucid state of mind. It is felt in this type of case Modified E.C.T. may be a lifesaving measure.

At the present time the only contraindication to the use of Modified Electro Therapy in our hands is in cases of acute myocardial decompensation. Patients are not treated in this condition.

Cardiac complications, such as hypertension, history of previous coronary infarctions or subarachnoid hemorrhage are not necessarily contraindications to therapy and, as mentioned above, if these patients with agitated depressions are not treated they may so severely aggravate their cardiac condition as to cause death. Dr. Carl Malmquist,[6,7,8] University of Michigan Medical School, reports the results of Modified Electro Therapy in fifty high risk patients. In his paper he cites N. Raskin[9] who had two patients who died of coronary thrombosis twenty-four hours prior to the onset of the first Modified E.C.T.

Summary

1. It is extremely important, and this author feels very strongly, that mental depressions in elderly people should be more carefully scrutinized and evaluated. Too many of these cases are classified as being due to arteriosclerosis, senility, etc. when actually a good many of them are suffering from manic depressive illness.

2. These elderly people withstand Modified Electro Therapy extremely well and should not be denied the benefit of this type of therapy because of their chronological age or because of cardiac complications, except in the presence of acute cardiac decompensation.

The instance of mortality from Modified Electro Therapy per se has been extremely rare and the connection between death and treatment are often quite tenuous.

4. The marked difference in the prognosis in these cases should be considered. The alleviation of suffering to the patient, which is, after all, the physician's main objective, should also be noted. In addition, it is quite satisfying to the physician who in a matter of a few weeks can change the entire personality of the afflicted person.

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Continued on Page 236



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Moreover, eight years' experience has demonstrated that Lomotil controls diarrhea with a minimum of unwanted secondary actions.

Senra del Valle and his associates[1] conducted a study of 477 children with diarrhea, most of whom were hospitalized with the disorder. Lomotil, used in 407 of the children, shortened the duration of the diarrhea.

Grinszpan, Goldstein and Divito[2] used Lomotil in 20 children with diarrhea and also reported a prompt disappearance of diarrhea. Harris and Beveridge[3] in a double-blind study of 50 children with diarrhea, however, found no clear pattern to suggest that Lomotil influenced the course of the condition.

Michener, Brown and Turnbull[4] added evidence supporting the beneficial effects of Lomotil in 80 children, concluding that Lomotil was highly useful in controlling abdominal cramping, diarrhea and hypermotility.

Children: Total Daily Dosage

3-6 mo. . . . ½ tsp.* t.i.d. (3 mg.)
6-12 mo. . . ½ tsp. q.i.d. (4 mg.)
1-2 yr. . . . . ½ tsp. 5 times daily (5 mg.)
2-5 yr. . . . . 1 tsp. t.i.d. (6 mg.)
5-8 yr. . . . . 1 tsp. q.i.d. (8 mg.)
8-12 yr. . . . 1 tsp. 5 times daily (10 mg.)
Adults: . . . . 2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

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SEARLE

Research in the Service of Medicine


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Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Electrocardiographic Abnormalities Induced By Thioridazine (Mellaril®)

Kelly and associates first reported striking T-wave abnormalities and two fatal cases of ventricular tachycardia . . . in a series of patients who were taking thioridazine (Mellaril). These observations were later extended by Van and St. Jean who found similar electrocardiographic abnormalities in emotionally disturbed patients who were taking other members of the phenothiazine group of drugs. . . . Two instances of thioridazine-induced ventricular tachycardia with favorable outcomes also have been reported.

Thioridazine-induced T-wave abnormalities may result from as little as 200 mg. of the drug in 24 hours. Although the ventricular arrhythmias have occurred in patients taking higher daily doses (600 to 3,600 mg.), it is not known if this serious complication is dose related.

The effects on repolarization have been likened to the quinidine or procainamide effect, yet unlike these drugs, thioridazine does not prolong the QRS, except . . . in the ventricular arrhythmias. . . . Its clinical application as an antirhythmic agent remains an interesting possibility.

. . . the usual electrocardiographic abnormality . . . is "blunted," "flattened," or "bifid" and occasionally inverted T-waves. . . . These changes may simulate the electrocardiographic changes of hypokalemia; however, serum electrolytes and the S-T segments are normal. Although similar repolarization abnormalities may be seen in patients taking the other phenothiazines, the effect is not as pronounced and frequent as with thioridazine. These changes are reversible upon discontinuing the drug.

The most likely explanation for the . . . electrocardiographic changes is a direct drug effect upon the myocardium. . . . Likewise, the deposition of an acid mucopolysaccharide about intramyocardial and subendocardial capillary-arterioles has been found in patients who were taking phenothiazines and died unexpectedly and suddenly. Various arrhythmias and T-wave changes had been present prior to death. Similar lesions could be produced in experimental animals fed phenothiazines and subjected to chronic stress. . .

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Burda, C. D., American Heart Journal, Vol. 76, pages 153-156, 1968.

CASE OF THE MONTH*

Foreword

The Maine Institute of Continuing Medical Education
Specialized Medical Symposia and Courses

In the spring of this year, the Maine Institute of Continuing Medical Education was established at the Augusta General Hospital in association with the Togus Veterans Hospital for the purpose of providing specialized medical symposia and courses which have not otherwise been available in Maine. Faculty for the different courses and symposia have been made up of Maine physicians and physicians and scientists from the entire nation. In a very short space of time much has developed. The first Maine Nuclear Medical Symposium was held in May. A special symposium on Immunology and Cancer was held in June. Throughout the summer a 9-week course in basic radiologic technology was originated as part of the initial training in a long-established school of Radiologic Technology at the Augusta General Hospital and students associated with many other Maine Hospitals were in attendance. A special week long course in the Operation of a Rectilinear Scanner including 15 hours of nuclear medical physics, was very successfully received in August. A special course for coronary care nurses is being developed for later in the fall. This course will be open to all nursing personnel presently working or interested in becoming involved in coronary nursing care. Beginning in November, there will be regularly appearing in The Journal of the Maine Medical Association a "Case of the Month" with emphasis on presenting a case history and emphasizing diagnosis and management, especially on less well understood problems. Also at the present time, a monthly gastrointestinal conference is being developed, hoping to combine the information and abilities of several gastroenterologists, radiologists, and surgeons in a review of well-documented cases especially from the Central Maine region. Many of these cases also may ultimately become "Cases of the Month" for The Journal of the Maine Medical Association.

Program Directors

Francis J. O'Connor, M.D., Augusta General Hospital
Robert L. Ohler, M.D., Togus Veterans Administration Hospital

Case No. 1

This 73-year-old white female was essentially well until four days prior to the admission. At that time she began having some abdominal distress with minimal amount of pain followed by persistent vomiting over the last four days. There was no history of diarrhea or vomiting. There was a past history of intestinal obstruction secondary to adhesions of the small bowel. Exploratory laparotomy and lysis of the adhesions were done at that time. She had no other previous serious illness or hospitalizations. On physical examination the patient was in no acute distress. The abdomen was protuberant but there were no palpable masses or localized tenderness. A scar in the right lower abdomen was present related to previous surgery. The BUN 70; hemoglobin 19.0 grams %; hematocrit 55; RBC 549; WBC 6,700 with 10 bands, 61 polys, 21 lymphs, 6 monos and 2 eosinophils. On the plain film of the abdomen, Fig. 1, there was evidence of marked distention of the small bowel with gas and fluid indicating small bowel obstruction. A barium enema was performed and the barium was advanced beyond the ileocecal valve with the intention to perform a small bowel enema and demonstrate the point of obstruction. Figs. 2 and 3 demonstrate the large, oval, intraluminal filling defect at the distal ileum producing obstruction to the retrograde flow of the barium beyond this point. On the basis of these findings the patient was operated. At exploration, a large gallstone impacted at the distal ileum was found. The patient had a smooth postoperative course and was discharged.

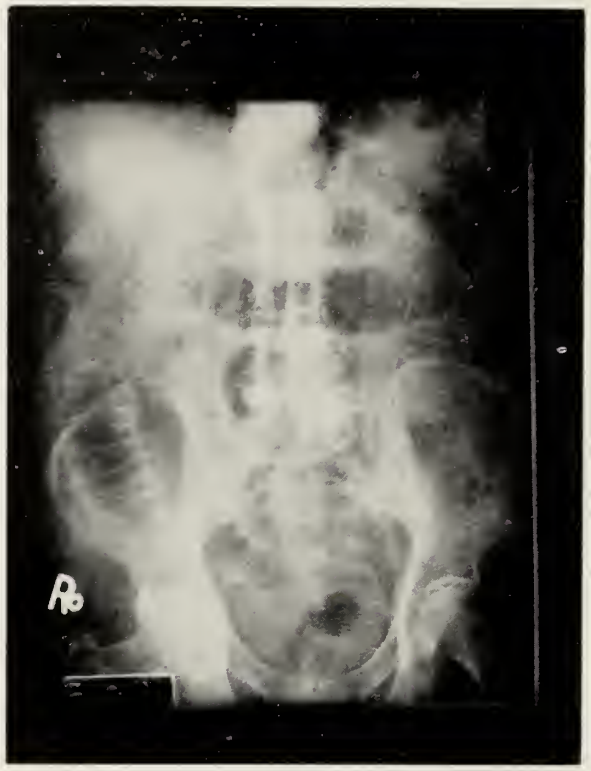


Fig. 1

*From the Maine Institute of Continuing Medical Education, the Augusta General Hospital in association with Veterans Administration Center, Togus, Maine.
Program Directors: Francis J. O'Connor, M.D., Augusta General Hospital and Robert L. Ohler, M.D., Veterans Administration Center, Togus, Maine.
Editor: Demitrios Nikolaidis, M.D., Radiology Dept., Augusta General Hospital, Augusta, Maine.



Fig. 2



Fig. 3

Discussion

Approximately 1% of all cases of intestinal obstruction are due to gallstones. The diagnosis is made radiographically in 25 to 60% of all cases. The diagnostic signs are those of a radio opaque stone in an unusual location associated with ileus. A shift in the position of the gallstone in a follow-up abdominal film may be observed. Sudden disappearance of a stone from the right upper quadrant associated with acute intestinal obstruction are also diagnostic of gallstone ileum. Indirect radiological sign on the abdominal film, if present, is the presence of air in the biliary tree or gallbladder from the internal biliary fistula.

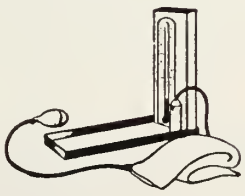
The most common site of obstruction is the terminal ileum. Gallstones may be lodged, however, in the colon in the case where a pre-existing lesion narrows its lumen.

Many of the stones, as in our case, are composed of cholesterol and are not opaque and consequently the diagnosis of gallstone ileus becomes very difficult. The only lead to the diagnosis may be the presence of air in the biliary tree. This sign was not present in our case. The barium enema followed by the small bowel enema helped in not only localizing the point of the small bowel obstruction but also in delineating the intraluminal filling defect.

This case proves the great value of the small bowel enema in the evaluation of small bowel pathology and, in particular, of obstruction.

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Radiologic Diagnosis of Acute Abdomen Disease. The Radiologic Clinics of North America, Volume II, 1946.



AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Personal TV Message by William Talman Released by the American Cancer Society

NEW YORK, N.Y. — William Talman, who appeared as the district attorney on the "Perry Mason" show, knew that he had incurable lung cancer before he died on August 30, and he arranged a special legacy — a personal TV message now released by the American Cancer Society.

Talman, a three-pack-a-day cigarette smoker for all of his adult life, asked the Society to produce the one-minute TV spot and he explained, "Before I die I want to do what I can to leave a world free of cancer for my six children."

The result is a direct statement from a man familiar to millions as a tough fighter who didn't quit easily although he always lost to Perry Mason. Talman first introduces his wife and children and then recalls those famous "courtroom" battles.

He says, "You know, I didn't really mind losing those courtroom battles. But I'm in a battle right now I don't want to lose at all because if I lose it it means losing my wife and those kids you just met. I've got lung cancer.

"So take some advice about smoking and losing from someone who's been doing both for years. If you haven't smoked — don't start. If you do smoke — quit. Don't be a loser."

According to Lane W. Adams, executive vice president of the Society, the TV spot is being released to the three major national television networks and to local stations through the Society's 58 Divisions and more than 3,000 local Units.

"One of the last things Bill Talman did was to visit our national office in Manhattan in early August to see the films. He was in pain and his courage was only matched by his desire to do something for other people," Adams said.

Talman also made a special short film to be shown to American Cancer Society volunteers for the April 1969 Crusade. He tells them, "When I was a kid, eight or nine, my dad offered me $1,000 and a gold watch if I would get to the age of 21 without smoking a cigarette. I lost that case before I was 12. Of all the cases in my whole life, that I've lost, of all the bets I've lost, of all the chances I've blown, that one I regret the most today. . . ."

Noting that his life was being sustained by medical advances "made possible because 20 or 30 years ago people whose names I'll never know contributed money to the American Cancer Society . . ." he says, "Let me join you in spirit, in prayer, even if I'm gone when you see me speak these words to you. Let me join you in this Crusade and let's make this world a world that is cancer free."

The 53-year-old actor learned last September that he had a large tumor in his right lung. Surgery revealed an inoperable cancer. He died on August 30 in West Valley Community Hospital, Encino, California, near his home. At his side were his wife and their four eldest children.

American Cancer Society News Service Release

County Society Notes

LINCOLN-SAGADAHOC

The Lincoln-Sagadahoc County Medical Society at a meeting on May 21, 1968 nominated John F. Andrews, M.D. as Councilor for the Third District, approved of the establishment and support of diploma schools of nursing, and agreed that the resolution of the M.M.A. School Health Committee be supported (that the health and education programs in the State Department of Education be studied and encouraged).

Henry A. Hudson, M.D. was elected to membership by transfer from the Cumberland County Medical Society and Miriam Doble, M.D. by transfer from Franklin County Medical Society.

Alfred E. Swett, M.D. of the Mercy Hospital in Portland was the guest speaker. He spoke on Angiography.

GEORGE W. BOSTWICK, M.D., *Secretary*

The Lincoln-Sagadahoc County Medical Society met at The Ledges Inn in Wiscasset, Maine on September 17, 1968.

New business included the discussion of house calls and mileage fees.

A letter from Asa C. Adams, M.D., President of the Maine Medical Association was read. Dr. Adams was present at the meeting and spoke briefly.

Richard Evans, III, M.D. of Bath was voted into membership.

Lawrence M. Leonard, M.D. of Portland, the guest speaker, spoke on hip reconstruction and other matters.

ALAN W. ZELLER, M.D., *Secretary pro tem*

CUMBERLAND

At the May 16, 1968 meeting of the Cumberland County Medical Society the members were notified that the resolution approved by the Cumberland County Society for establishment of a Research Fund would be included in the agenda for the meeting of the M.M.A. House of Delegates in June; Benjamin Zolov, M.D. explained the admissions policy at the Portland City Hospital; and George F. Sager, M.D. reviewed the interim meeting of the M.M.A. House of Delegates in April and presented in detail two resolutions: one introduced by the Somerset County Medical Society concerning nursing education programs, and the resolution presented by the M.M.A. School Health Committee relative to Health Education Programs in the public schools of Maine. Motions supporting these two resolutions were approved.

STANLEY B. SYLVESTER, M.D., *Secretary*

A meeting of the Cumberland County Medical Society was held at the Steer Inn in South Portland, Maine on September 19, 1968 with one hundred and seven members and guests present. Following a social hour and dinner, the meeting was called to order by the President, Eugene P. McManamy, M.D.

The applications of Drs. Ghazar Darakjian and Lawrence Leonard were presented and were voted into membership. Russell Briggs, M.D. also was voted into membership as a transfer in good standing from the Dane County Medical Society in Madison, Wisconsin.

Charles R. Glassmire, M.D. summarized the important points that were considered at the annual meeting in Rockland in June.

A letter was read from the Portland Regional Opportunity Program requesting endorsement of a program of family planning, gynecological examinations, sex education, and contraceptive advice. This matter was discussed by Drs. Miller and Bacastow and the motion of endorsement for this request was tabled pending further information.

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YORK

President, Eugene P. Wolfahrt, M.D., Saco
Secretary, Charles W. Kinghorn, M.D., Kittery

A letter from Dr. Jacobson of the Department of Health and Welfare requested approval of a Diabetic Detection and Education Program to be carried out in Cumberland County. This was discussed by Elton R. Blaisdell, M.D. who has been performing a similar service through a committee from the Maine Medical Association and it was voted to approve this program.

Buell A. Miller, M.D. discussed upgrading of doctors' coverage in Blue Cross and Blue Shield and also the possibility of including doctors' aides and office help in the blanket Maine Medical Association program. After some discussion, Albert Aranson, M.D. was instructed to find out more information from the State Insurance Committee.

Winton Briggs, M.D. discussed the Fluoridation Program and moved that the Cumberland County Medical Society support this program by making a $1,500 contribution to the Greater Portland Citizen's Committee for Dental Health. After some discussion, this motion was carried.

Some discussion occurred regarding the Health Task Force and the Model Cities Program. Considerable interest was expressed in knowing more about this program and John R. Davy, M.D. will be asked to be present at the next meeting to discuss it.

The President is to appoint committees to report on resolutions on the deaths of Drs. Lloyd W. Bishop and Francis A. Fagone.

GEORGE F. SAGER, M.D., *Secretary pro tem*

News, Notes and Announcements

Operation "Partner's Ship"

Maine doctors are asked to search their hospitals, their homes, and their hearts for material contributions to the hospitals in our Sister State of Rio Grande do Norte in the impoverished northeastern section of Brazil.

On January 3rd, the Maine Maritime Academy Ship "State of Maine" becomes the "Partner's Ship" as she sails for Natal, the capital of Rio Grande do Norte, laden with tangible expressions of concern and goodwill. Medical tests, x-ray machines, hospital beds, and many other items have already been donated. More is needed.

The Maine Partners of the Alliance, a citizen to citizen, non-governmental organization now needs help directly from the doctors of Maine. Some of the items needed are listed below. The ship must be loaded by December 15, so please act soon. All information should be passed through Mrs. Joan Hutchinson, the Partners Executive Secretary, 63 Mayflower Road, Augusta. Telephone 622-5708.

SISTER MARY CARMELA, Portland
GILBERT GRIMES, M.D., Lewiston
DANIEL F. HANLEY, M.D., Brunswick
CLEMENT A. HIEBERT, M.D., Portland
for the Partner's Board of Directors

List of suggested materials for collection for Operation "Partner's Ship."

EDUCATION

- Library books
- Technical books
- Reference books (for new library in Natal)
- Bookcases
- Chairs
- Moveable desks, chairs, and chair-desks
- Typewriters
- Ditto copiers
- Duplicating Equip.
- Pencil Sharpeners
- Games
- Sports Equip.
- Playground balls and Equip.
- Microscopes
- Simple Chemistry and Physics Equip.

MEDICAL EQUIPMENT

- Hospital beds
- Cribs
- Stands
- Related hospital furniture
- Laboratory Equip.
- X-Ray Machines
- Incubators
- Iron Lungs
- Small vacuum pumps
- Operating tables
- Operating lights
- Sterilizers
- Antibiotics
- Vitamins
- Hypodermic Syringes
- Pharmaceuticals

AGRICULTURE

- Handtools, incl. shovels & hoes
- Fertilizer
- Lime
- Seed
- Horse drawn equip.
- Tractors
- Woodworking tools for woodworking shop

ART SUPPLIES, PHOTOGRAPHY EQUIPMENT AND MARINE & FISHING EQUIPMENT

State of Maine Board of Registration of Medicine
Secretary — George E. Sullivan, M.D.
Waterville, Maine
Physicians Licensed to Practice Medicine and Surgery in the State of Maine
June 18, 19, 20, 1968

Through Examination

Mostafa A. E. Batata, M.D., Roswell Park Mem. Inst., Buffalo, N.Y.
Enid F. Caldwell, M.D., McLean Hosp., Belmont, Mass.
Enayat Hakim-Elahi, M.D., 87-50 167th St., Jamaica, N.Y.
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Ali Ghazi, M.D., 195 Adams St., Brooklyn, N.Y.
Ramanath Iyer, M.D., Maine Medical Ctr., Portland, Me.
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Yoshiaki Tsukada, M.D., 3016 Barnes Ave., Bronx, N.Y.
Ru Lin Ko Tung, M.D., 8811 Germantown Ave., Philadelphia, Pa.
Antoine A. Atallah, M.D., Main St., Jackman Station, Me.
Paul Atallah, M.D., Main St., Jackman Station, Me.
Pierre F. Becker, M.D., 329 Harvard St., Cambridge, Mass.
Sung Whan Cho, M.D., Bayside Dr., St. John, New Brunswick
Philip Datlof, M.D., North Shore Hosp., Manhasset, N.Y.
Chanan W. Haenosh, M.D., Miriam Hosp., Providence, R.I.
Judith M. Lehotay, M.D., 84 Hallam Rd., Buffalo, N.Y.
Angelo J. Lorusso, M.D., 15 Park St., E. Walpole, Mass.
Sabry E. Mason, M.D., Main St., Calais, Me.
Sindhu R. Nayak, M.D., 3764 La Peltrie, Montreal, Can.
Stella L. Uldall, M.D., P. O. Box 724, Augusta, Me.
Rauf Yagan, M.D., Highland View Hosp., Cleveland, Ohio

Through Reciprocity

Richard P. Ames, M.D., The Roosevelt Hosp., New York, N.Y.
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Russell C. Briggs, M.D., Maine Medical Ctr., Portland, Me.
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John N. Burke, M.D., 135 Nokomis Trail, Medford Lks., N.J.
Roger E. Condit, M.D., Hanover, N.H.
Raymond E. Culver, M.D., 14 Gilman St., Waterville, Me.
Harvey W. Eastman, M.D., 235 State St., Portland, Me.
Joseph H. Edgar, Jr., M.D., 60 Munjoy St., Portland, Me.
Peter A. Evans, M.D., P. O. Box 368, Norwich, Vt.
Garland A. Gray, M.D., The Choate School, Wallingford, Conn.
Tilbert R. M. Gyorgy, M.D., Readfield, Me.
Lloyd R. Hoffman, M.D., 47 Randolph Dr., Bangor, Me.
Earle A. Irvin, M.D., 1040 Bishop Rd., Grosse Pointe Pk., Mich.
Andrew P. Iverson, M.D., Maine Medical Ctr., Portland, Me.
Abraham Kaplan, M.D., 7521 Hawthorne, Raytown, Mo.
Paul J. Killoran, M.D., 435 E. 70th St., New York, N.Y.
Joseph A. Mangano, M.D., 342 No. Columbus Ave., Mt. Vernon, N.Y.
Andre P. Marcotte, M.D., 300 East Ave., Lewiston, Me.
Alfred L. Mauro, M.D., 70 Kimball St., Yonkers, N.Y.
James H. McDonald, M.D., 840 S. Wood St., Chicago, Ill.
Gerald A. Metz, M.D., 456 Tenafly Rd., Englewood, N.J.
Conner M. Moore, M.D., 1025 Redway Ave., Cincinnati, Ohio
John C. Neff, M.D., U.S. Naval Hosp., Portsmouth, N.H.
Laurier E. Nolin, M.D., Maine Medical Ctr., Portland, Me.
Edward J. Palmer, M.D., 1269 Beacon St., Brookline, Mass.
Mahlon P. Palmer, M.D., Nasson College, Springvale, Me.
Richard C. Pembrook, M.D., 1806B George Crt., Lincoln, Neb.
Saul H. Phillips, M.D., Box 401, Veterans Adm. Ctr., Togus, Me.
Tibor G. Selmeci, M.D., Hayden Crt., Woodstock, N.B., Can.
Gerald E. Stiles, M.D., Box 1030, St. Stephen, N.B., Can.
Richard M. Swengel, M.D., 123 Franklin Rd., Hamden, Conn.
Robert P. Timothy, M.D., 39 Brook Farm Rd., W. Roxbury, Mass.
Renato Travelli, M.D., Naval Hosp., St. Albans, N.Y.
John B. Truslow, M.D., Yarmouth Rd., Gray, Me.
Alan F. Woodruff, M.D., 507 Washington St., Braintree, Mass.

Call For Abstracts Made For Neurology, Neurosurgery Congresses

Two World Congresses, representing neurologists and neurosurgeons, have issued a call for abstracts for scientific material to be presented at a joint meeting to be held September 20-27, 1969 at the New York Hilton Hotel in New York, N. Y.

Deadline for submitting abstracts for the Ninth International Congress of Neurology and the Fourth International Congress of Neurological Surgery is January 15, 1969. The Abstracts, which are not to exceed 200 words, will be considered for major theme papers, free communications, motion picture presentations and scientific exhibits.

H. Houston Merritt, M.D., New York, N.Y., is President of the neurology Congress. A. Earl Walker, M.D., Baltimore, Md., is President of the neurosurgery Congress.

Official abstract form and other information on the Congresses may be obtained from the World Congresses of Neurological Sciences, Suite 417, 420 Lexington Avenue, New York, New York 10017.

Dermatologists To Hold Annual Scientific Meeting In December

SEATTLE, Wash. — The American Academy of Dermatology will hold its 27th Annual Meeting December 7-12, 1968 at the Palmer House, Chicago, Ill.

The meeting includes a weekend of concentrated postgraduate courses and four days of scientific presentations on topics ranging over the whole field of basic and clinical sciences applicable to the practice of dermatology. Close to 2,000 of the Academy membership of 3,500 are expected to attend from the United States, Canada and other countries.

The scientific meeting begins on Sunday with a whole day devoted to five-minute presentations on rare or interesting dermatologic problems. Nearly 100 dermatologists, including many from other countries, take part in this program.

Besides major reports on new research findings, the meeting will have several informal luncheon-discussions each day. These will be led by authorities in the particular area assigned to each discussion group. In addition, special sessions will be held, including the Residents' Forum for new research projects by residents in dermatology, and a section on military dermatology. Several special lectures will be given by prominent authorities in dermatology and other fields of medicine.

The Academy meeting will also have a Scientific Exhibit, with awards being given in two categories, original work and teaching value.

New Edition — Diagnostic Standards And Classification of Tuberculosis

Free to physicians upon request

The 1968 edition follows the contents of the previous version but with important changes. For example: the section on skin testing deals with doubtful reactions and multiple puncture tests; the requirements for inactive status are shortened; there is a new section on classification of tuberculosis in children.

This authoritative booklet by the American Thoracic Society is provided through the Maine Thoracic Society. It will be available in November.

To obtain a copy clip out coupon below and mail to Maine TB and Health Association, 2 Bridge Street, Augusta, Maine 04330.

— — — — — — — — — — —

To: Maine TB and Health Assn.

Please send a copy of Diagnostic Standards to the undersigned:

NAME .....

STREET .....

CITY .....

— — — — — — — — — — —

DEPRESSIONS IN THE ELDERLY

Continued from Page 228

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18 Neal Street, Portland, Maine 04102

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962: Section 4369, Title 39, United States Code)

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Maine Medical Association, P. O. Box 250, Brunswick, Maine 04011.
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities (If there are none, so state): None.
9. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, Postal Manual): The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes:

(Check one)

[X] Have not changed during preceding 12 months [ ] Have changed during preceding 12 months

(If changed, publisher must submit explanation of change with this statement.)

10. Extent and nature of circulation:

	Average No. Copies Each Issue During Preceding 12 Months	Single Issue Nearest To Filing Date
A. Total No. Copies Printed (Net Press Run)	1338	1363
B. Paid Circulation		
1. Sales through dealers and carriers, street vendors and counter sales	—	—
2. Mail subscriptions	76	83
C. Total Paid Circulation	76	83
D. Free Distribution (including samples) by mail, carrier or other means	1242	1259
E. Total Distribution (Sum of C and D)	1318	1342
F. Office Use, Left-Over, Unaccounted, Spoiled After Printing	20	21
G. Total (Sum of E &F—should equal net press run shown in A)	1338	1363

I certify that the statements made by me above are correct and complete.

ESTHER M. KENNARD, Business Manager

ACHROMYCIN® V
TETRACYCLINE

Contraindications: Hypersensitivity to tetracycline.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Side Effects: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle

LEDERLE LABORATORIES
A Division of
American Cyanamid Company
Pearl River, New York 10965

359-8

Suspected tetracycline-sensitive infection?

While waiting for the results of the sensitivity test, start the therapy likely to succeed...

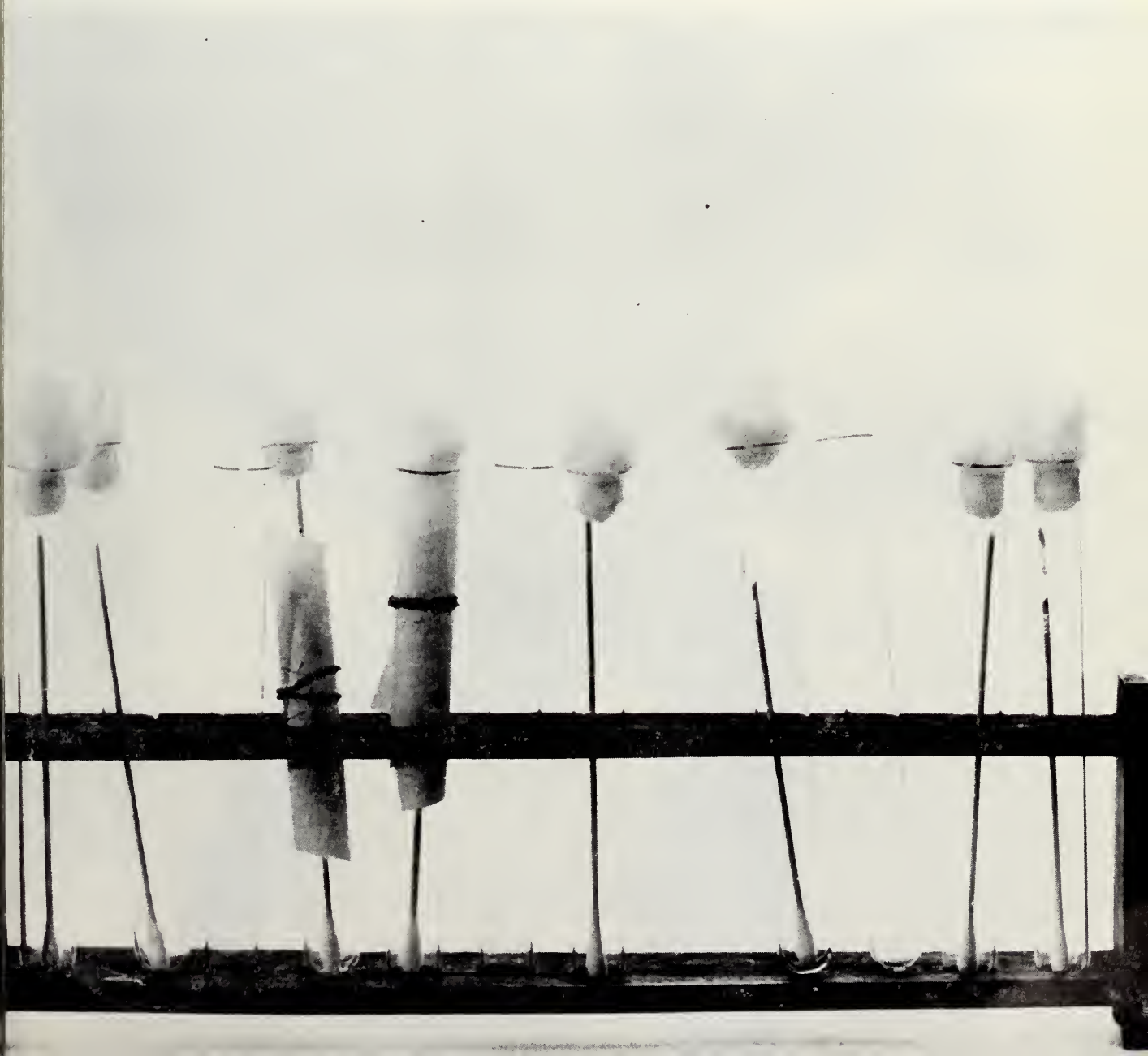
Although of course it can't replace routine sensitivity testing, your prescription for ACHROMYCIN® V, in a way, provides the ultimate test of therapy under rigorous *in vivo* conditions.

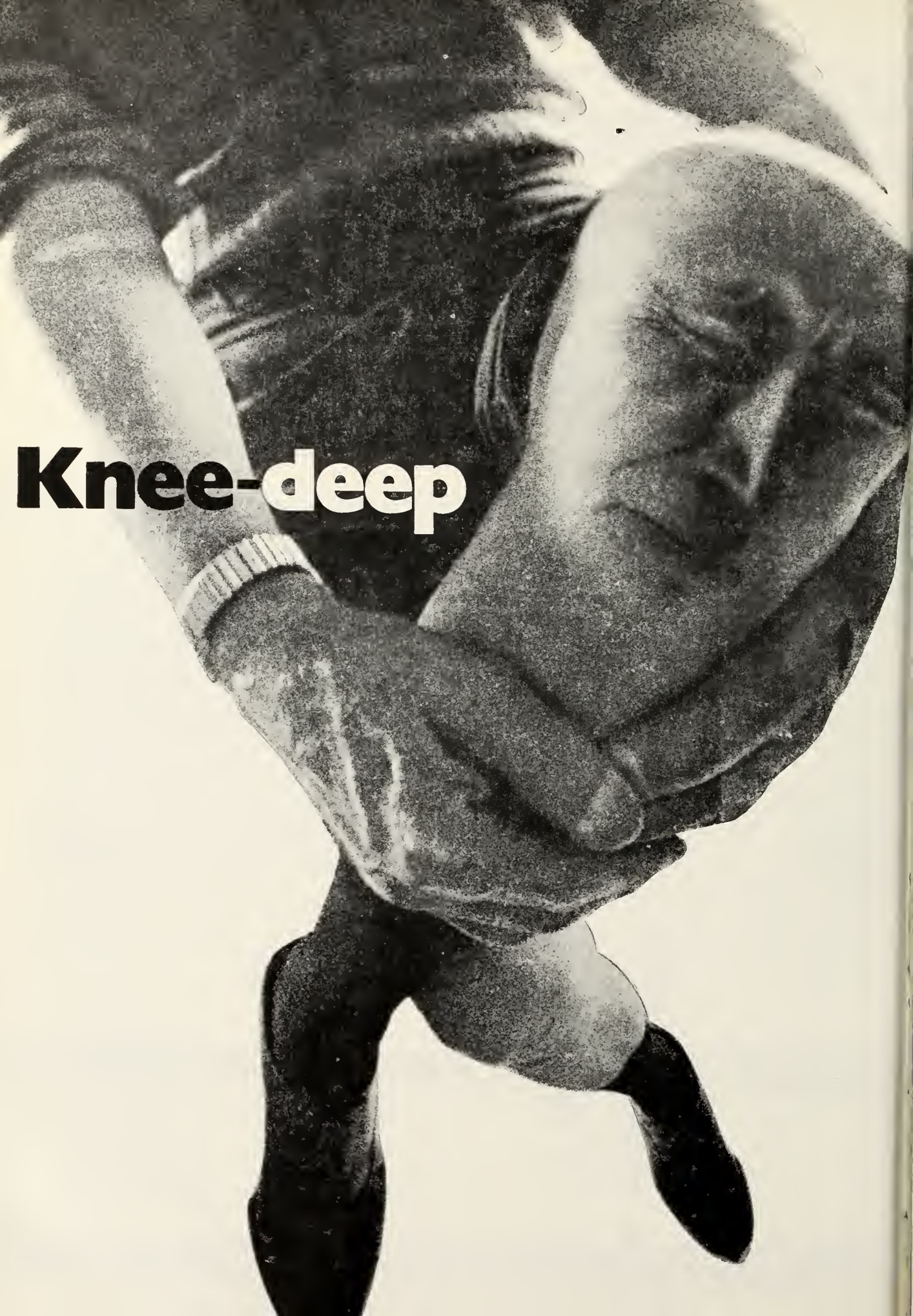
Because ACHROMYCIN® V is effective in treating so many common infections—caused by strains of tetracycline-sensitive organisms—doesn't *stat* dosage of this time-tested antibiotic make good sense?

←Prescribing Information

ACHROMYCIN® V
TETRACYCLINE
Lederle

The price differential is inconsequential.




Knee-deep

in osteoarthritic pain

If aspirin doesn't help, move in with Tandearil.

The trial period is brief: 1 week. Try one tablet q.i.d. at first. Tandearil usually starts working within 3 to 4 days. When response occurs, as little as 1 or 2 tablets daily may hold back pain and stiffness, and increase joint motion.

On the next page is a summary of adverse reactions, contraindications, warning and precautions.

Tandearil.
It can help get his mind off his knee.

Please review full Prescribing Information carefully before prescribing.

For osteoarthritic knees, spines, shoulders, hips, etc.:

Tandearil®
oxyphenbutazone

Tandearil, oxyphenbutazone:
For brief summary see next page.

Geigy

TA-6006



Tandearil®
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

(B)R-46-800-A

For complete details, please see full Prescribing Information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502



"Breathing's a snap again," he said gingerly.
(COMPLIMENTS OF DIMETAPP)

Help clear up that miserable stuffed-up feeling with Dimetapp. Each hard-working Extentab brings welcome relief from the stuffiness, drip and congestion of upper respiratory conditions for up to 10-12 hours. Yet, patients seldom experience drowsiness or overstimulation. The key to success is the Dimetapp formula: Dimetane (brompheniramine maleate)—along with phenylephrine and phenylpropanolamine, two time-tested decongestants. They get the job done . . . in a hurry.

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220
A·H·ROBINS

in sinusitis, colds, U.R.I.
Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

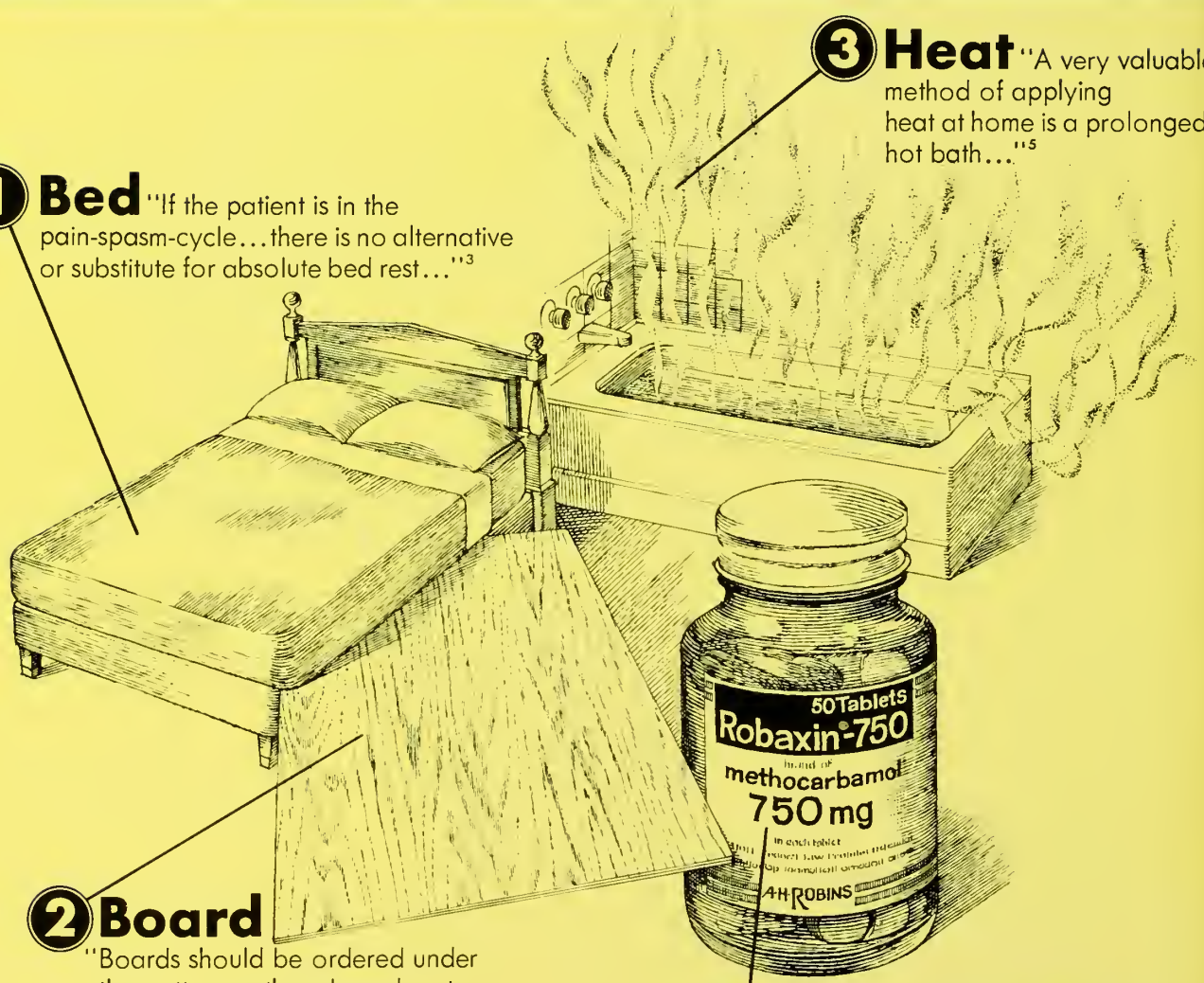
up to 10-12 hours clear breathing on one tablet



LOW-BACK PAIN

A CONSERVATIVE, FOUR-POINT PROGRAM

The low back pain that is most frequently seen in general practice is mechanical in nature, i.e., postural back pain, joint dysfunction and acute back strain.[1,2] For this type of discomfort, a conservative regimen is usually sufficient to relieve aches and pains, and to help keep the patient functioning. Components of this basic program include:



1 Bed "If the patient is in the pain-spasm-cycle...there is no alternative or substitute for absolute bed rest..."[3]

2 Board "Boards should be ordered under the mattress...these boards act by immobilizing the spine..."[4]

3 Heat "A very valuable method of applying heat at home is a prolonged hot bath..."[5]

4 Robaxin®-750 (methocarbamol, 750 mg. capsule-shaped tablets) A well-tolerated[6] skeletal muscle relaxant, methocarbamol helps relieve spasm "...without interfering with normal tone and movement."[7] And there is little likelihood of sedation.[6]

Indicated for relief of skeletal muscle spasm. **Contraindicated** in hypersensitive patients. **Side Effects** (lightheadedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently. See product literature for further details. **Also available:** Robaxin® Tablets (methocarbomol, 500 mg.) Robaxin Injectable (methocarbomol, 1 Gm./10 cc.)

References: (1). Gadfrey, C.M.: Applied Therop. 8:950, 1966. (2). Gattschalk, L.A.: GP 33:91, 1966. (3). Rawe, M.L.: J. Occup. Med. 2:219, 1960. (4). Cazen, L.: South Dokota J. Med. 18:26, 1965. (5). Sato-Hall, R.: Med. Sc. 14:23, 1963. (6). Weiss, M. and Weiss, S.: J. Am. Osteapath. A. 62:142, 1962. (7). Feuer, S.G., *et al.*: New Yark J. Med. 62:1985, 1962.

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Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67





*"Now that your acne is clearing up nicely,
it might be a good idea if you started losing some weight."*

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-Amphetamine Sulfate (15 mg.) with Meprobamate (300 mg.)
Sustained Release Capsules

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York

407-8

TELEPHONE
774-8276 FOR

Insurance for Members

OFFICIALLY ENDORSED by the

MAINE MEDICAL ASSOCIATION

DOW & PINKHAM

107 EXCHANGE STREET, PORTLAND

D&P
AN ANCHOR TO WINDWARD

BLUE CROSS AND OTHER INSURANCES ARE ACCEPTED



ANDREW FERGUS, M.D.
Dip'omate, American Board of Psychiatry
Chief of Staff

TAKEO KAWAMURA, M.D.
Psychiatrist
Sec. of Staff

- Utilizing all accepted forms of Psychiatric treatment.
- Alcoholics

The Utterback Private Hospital

31 Kenduskeag Avenue (Telephone 945-4555) Bangor, Maine

Beautful Grounds, Large Rooms with Bath, Mental Health Care for the Aged and Convalescent Care.
Reasonable Rates

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.



A realistic approach to pain relief



Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Muscle in Spasm



and Valium (diazepam)

The ability of Valium to help relieve skeletal muscle spasm—as well as psychic tension—demonstrates its clinical value and versatility.

The muscle-relaxant effect obtained with Valium, used adjunctively with other drugs or physiotherapy, favorably affects the entire cluster of spasm-related symptoms . . . helps accelerate return to normal activity.

When skeletal muscle spasm and psychic tension coexist, the calming effect of Valium is an added therapeutic benefit that contributes to the total management of the patient.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium®(diazepam)
2-mg, 5-mg, 10-mg tablets

ROCHE
Roche® LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



A little

Just one 50 or 100 mg. tablet in the morning can work a long diuretic day in edema and hypertension.

HY-6060



Hygroton® can work a long day too

chlorthalidone

That's because of its prolonged action, which usually provides smooth diuretic activity throughout the day. And one-a-day dosage means few tablets to take and few tablets to pay for in the long run.

Hygroton, brand of chlorthalidone, may mean troublesome side effects for certain patients. And you can't prescribe it in cases of demonstrated hypersensitivity to the drug or in severe renal or hepatic diseases.

Before writing it for your patients, please check the Prescribing Information. It's summarized on the next page.

Hygroton

chlorthalidone in edema and hypertension

Geigy



in edema and hypertension

A little Hygroton® can work a long day

chlorthalidone

Indications: Hypertension and mony types of edemo involving retention of salt and woter.

Contraindications: Hypersensitivity ond most coses of severe renol or hepotic diseases.

Warning: With the odministrotion of enteric-cooted potossium supplements, which should be used only when odequote dietory supplementotion is not practicol, the possibility of smoll-bowel lesions (obstruction, hemorrhoge, ond perforotion) should be kept in mind. Surgery for these lesions hos been required frequently and deaths have occurred. Discontinue enteric-cooted potossium supplements immediately if obdominol poin, distention, nouseo, vomiting, or gastrointestinol bleeding occur.

Use with coution in pregnont women ond nursing mothers since the drug may cross the plocental borrier and oppeor in cord blood ond since thiozides moy oppeor in breost milk. The drug moy result in fetal or neonotal joundice, thrombocytopenia, ond possibly other odverse reoctions which have occurred in the odult. When used in women of childbeoring age, balonce benefits of drug ogainst possible hozards to fetus.

Precautions: Antihypertensive therapy with this drug should olways be initioted coutiously in postsympathectomy potients ond in patients receiving gonglionic blocking agents, other potent ontihypertensive drugs or curore. Reduce dosoge of concomitant ontihypertensive agents by ot leost one-holf. Becouse of the possibility of progression of renol domoge, periodic determinotion of the BUN is indicoted. Discontinue if the BUN rises or liver dysfunction is oggrovoted. Hepotic como moy be precipitoted.

Electrolyte imbolonce, sodium ond/or potossium depletion may occur. If potossium depletion should occur during therapy, the drug should be discontinued ond potossium supplements given, provided the potient does not have marked oligurio.

Toke speciol core in cirrhosis or severe ischemic heort diseose ond in patients receiving corticosteroids, ACTH, or digitalis. Solt restriction is not recommended.

Adverse Reactions: Nausea, gostric irritotion, vomiting, onorexio, constipotion ond cromping, dizziness, weakness, restlessness, hyperglycemio, glycosurio, hyperuricemio, heodoche, muscle cramps, orthostotic hypotension, which may be potentiated when chlorthalidone is combined with borbiturotes, norcotics or olcohol, oplastic anemia, leukopenio, thrombocytopenia, ogronulocytosis, impotence, dysurio, tronsient myopio, skin roshes, urticorio, purpura, necrotizing ongiitis, ocute gout, and poncreotitis when epigostric poin or unexploined G.I. symptoms develop ofter prolonged odministrotion. Other reoctions reported with this closs of compounds include: joundice, xonthopsio, poresthesio, ond photosensitizotion.

Average Dosage: 50 or 100 mg. with breokfast daily or 100 mg. every other day.

Availability: White, single-scored toblets of 100 mg. ond oquo toblets of 50 mg., in bottles of 100 and 1000.

(B)46-230-E

For full details, please see the complete prescribing information.

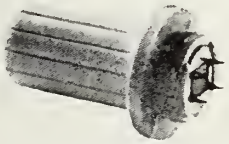
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Division of
Geigy Chemicol Corporotion
Ardsley, New York 10502

HY-6060

Tuberculosis? Influenza?
Pneumonia? Leukemia?
Hodgkin's Disease? Syphilis?
Systemic Fungal Diseases?
Chronic Chest Diseases?
or

HISTO?

(Histoplasmosis—"The Masquerader")



A new aid in differential diagnosis

HISTOPLASMIN, TINE TEST
(Rosenthal)

The LEDERTINE™ Applicator with the Blue Handle

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

Lederle

Ask your representative for details or write Medical Advisory Dept., Lederle Laboratories, Pearl River, New York 10965. 406-8





Each Cough Calmer™ contains the same active ingredients as a half-teaspoonful of Robitussin-DM®: Glyceryl guaiacolate, 50 mg.; Dextromethorphan hydrobromide, 7.5 mg.
A. H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS



One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.
Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.



Photo professionally posed.

No injection after all!

This penicillin produces high, fast levels—orally.

Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL **PEN•VEE® K**

(potassium phenoxymethyl penicillin) Wyeth

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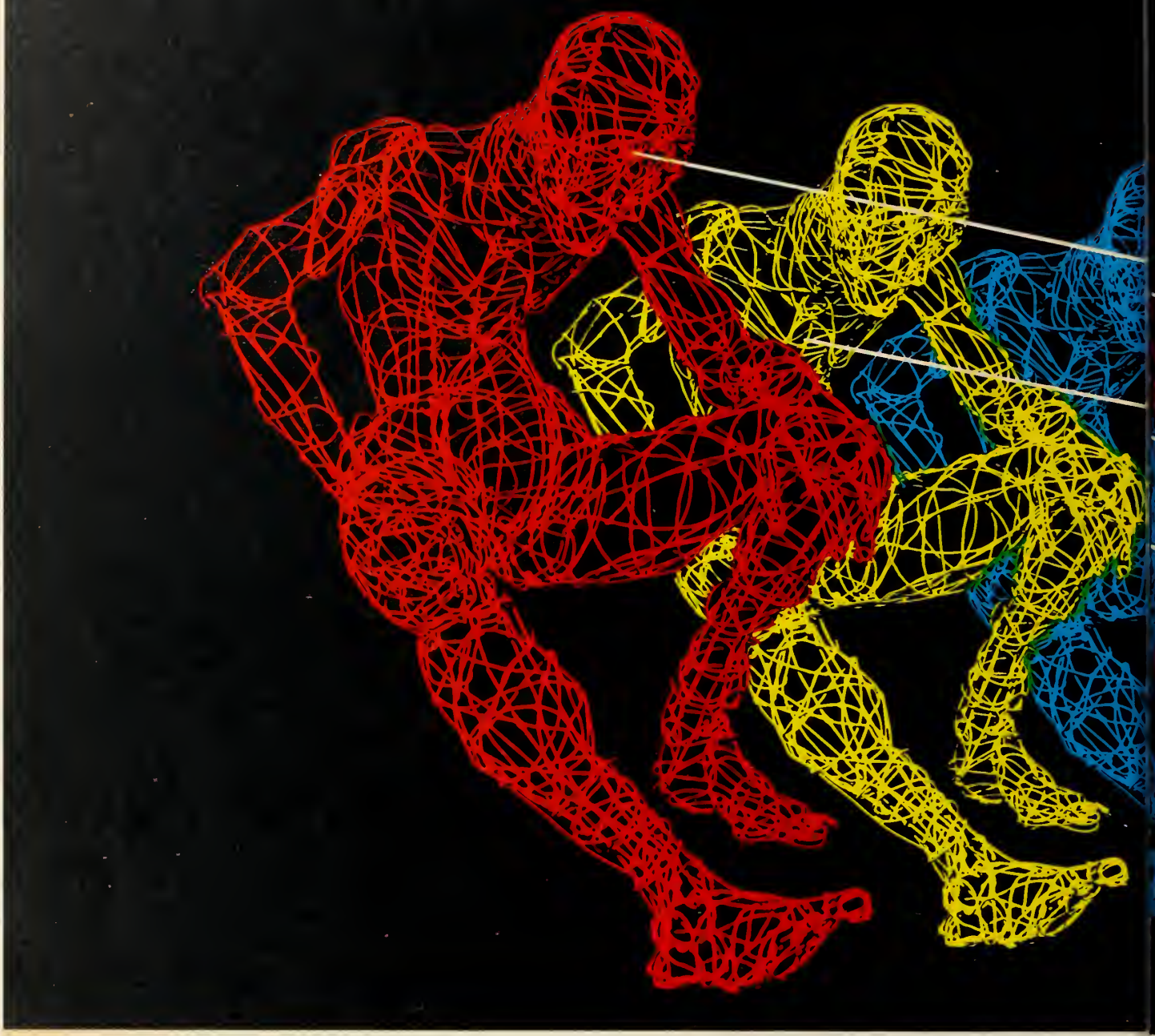
"will this one taste O. K.?"

The *prolonged* acceptance of Mylanta was recently confirmed in 87.5% of 104 patients—after a total of 20,459 documented days of therapy.* *Danhof, I. E.: Report on file.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. *Dosage:* One or two tablets (well chewed or allowed to dissolve in the mouth) or one or two teaspoonfuls to be taken between meals and at bedtime.

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a comprehensive hematinic



Description: Each Pulvule® contains—

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Cobalamin Concentrate, N.F., equivalent to Cobalamin	7.5 mcg.
(The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	
Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	1 mg.

Indications: Trinsicon® (hematinic concentrate with intrinsic factor, Lilly) is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia.

Contraindications: Hemochromatosis and hemosiderosis.

Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

In pernicious anemia, the use of folic acid without adequate vitamin B_{12} therapy may result in hematologic remission but neurological progression. Adequate doses of vitamin B_{12} (parenteral, or oral with potent intrinsic factor as in Trinsicon® [hematinic concentrate with intrinsic factor, Lilly]) usually prevent, halt, or improve the neurological changes.

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Vitamin B_{12} plus intrinsic factor (15 mcg. B_{12} activity)—helps provide adequate levels of this important vitamin.

Folic acid (1 mg.)—treats nutritional macrocytic anemias and/or malabsorption syndromes.

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clinical and laboratory studies are considered essential and are recommended.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastro-intestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects.

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Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500. [032568]

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Lilly



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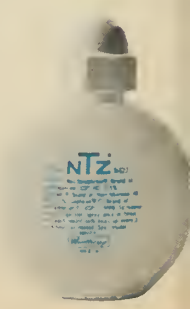
Supplied: NTZ Nasal Spray, plastic squeeze bottles of 20 ml.; NTZ Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

NTZ is more than a simple vasoconstrictor. It contains

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THE EARLY SYMPTOMS OF OSTEOPOROSIS

low back pain muscle spasm

OFTEN RESPONO TO CALCIUM THERAPY



In postmenopausal and geriatric patients, low back pain of unspecified origin may be symptomatic of the early stages of osteoporosis and calcium depletion. Treatment with Calcium-Forte, a form of calcium readily available for absorption, may help to restore a positive calcium balance. In doing so, often it can alleviate the symptoms and help to arrest the progress of osteoporosis by preventing further skeletal damage.

One packet of Calcium-Forte contains the equivalent of 500 mg. elemental calcium, the same amount found in one-half quart of milk.

☐ pleasant tasting ☐ highly concentrated
☐ readily soluble

Indications: As an adjunctive measure for major calcium depletion states, which require elemental intakes higher than normal dietary supplements can provide, such as the initial stages of postmenopausal and senile osteoporosis and advanced osteoporosis; also adjunctively with Vitamin D for the treatment of mild or latent hypocalcemic tetany.

Contraindications: Lithiasis, hypercalcemia, cardiac or renal failure.
Precautions: If the patient has a history of renal disease, administration of Effervescent Calcium Granules should be accompanied by abundant intake of acidulous liquids such as fruit juices to avoid hypercalciuria. Should hypercalciuria occur, dosage should be reduced accordingly. Due consideration should be given to the sodium content of Effervescent Calcium Granules when treating patients requiring low sodium diets.
Side Effects: In high doses may cause indigestion or diarrhea. Constipation may occur occasionally.
Composition: Each packet of orange-flavored Effervescent Calcium Granules contains 2.94 grams of the double salt calcium lactate-gluconate and 0.30 grams of calcium carbonate (also contains 325 milligrams of sodium per packet).

New CALCIUM-FORTE

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Quickly relieves anxiety~Helps improve response in psychophysiologic disorders~Seldom impairs mental acuity or physical coordination, on proper dosage~Has wide margin of safety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 50. Libritabs™ (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100. With respect to clinical activity, capsules and tablets are indistinguishable.



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THE EARLY SYMPTOMS OF OSTEOPOROSIS

low back pain
muscle spasm

OFTEN RESPONO TO CALCIUM THERAPY



In postmenopausal and geriatric patients, low back pain of unspecified origin may be symptomatic of the early stages of osteoporosis and calcium depletion. Treatment with Calcium-Forte, a form of calcium readily available for absorption, may help to restore a positive calcium balance. In doing so, often it can alleviate the symptoms and help to arrest the progress of osteoporosis by preventing further skeletal damage.

One packet of Calcium-Forte contains the equivalent of 500 mg. elemental calcium, the same amount found in one-half quart of milk.

☐ pleasant tasting ☐ highly concentrated
☐ readily soluble

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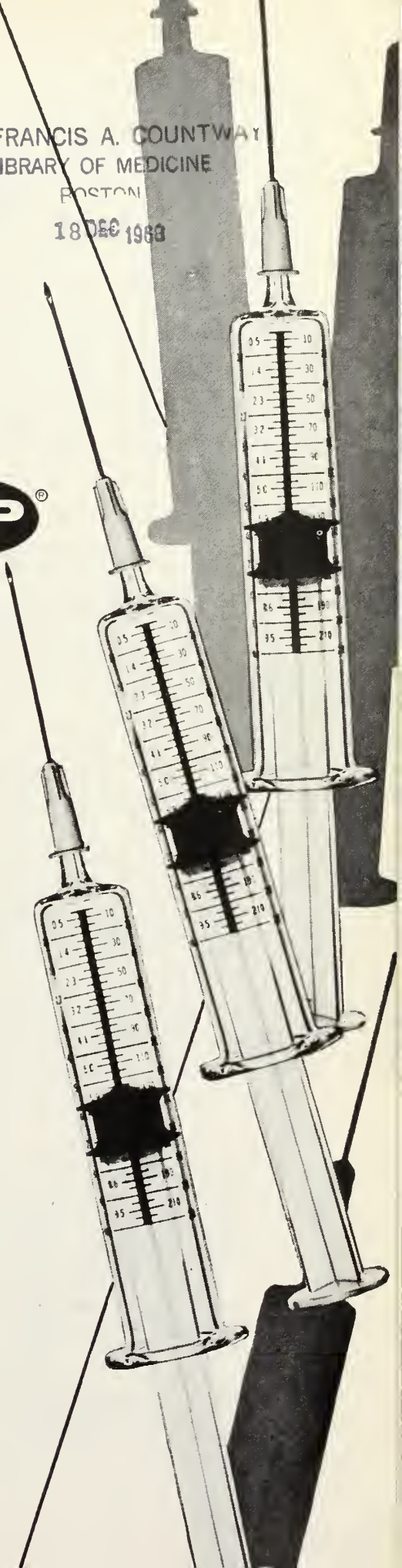
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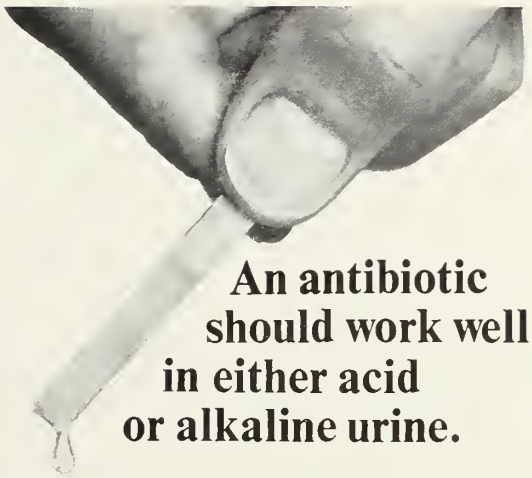
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Not when the causative organism is a strain sensitive to DECLOMYCIN® Demethylchlortetracycline, as is often the case.

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Effectiveness: DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines in infections caused by organisms sensitive to the tetracyclines.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system – anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin – maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney – rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions–urticaria, angioneurotic edema, anaphylaxis. Teeth – dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Capsules: 150 mg; Tablets: film coated – 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

355-8

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Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. Patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Painful Shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

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Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

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Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthesiologist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT.

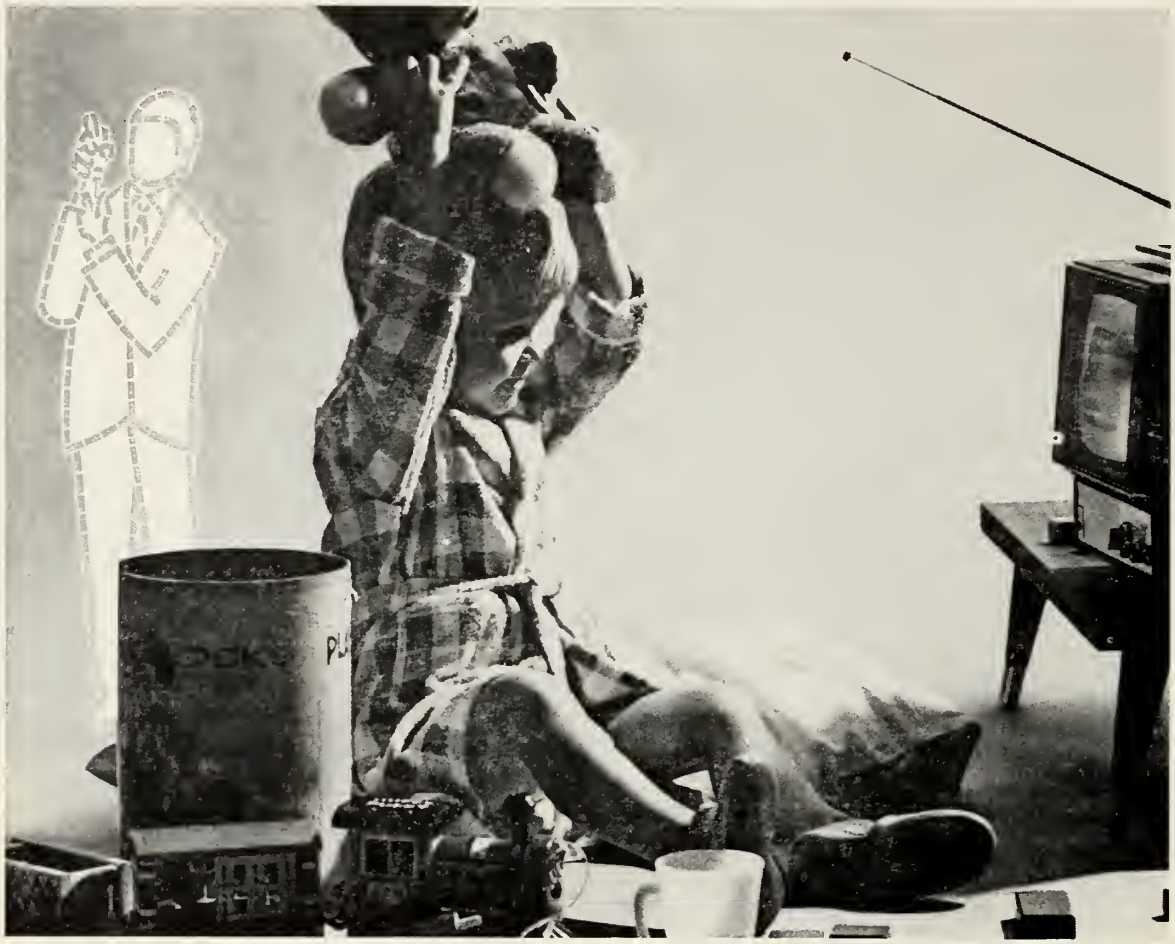
Adverse Reactions: Drowsiness, skin rash, "hangover," systemic disturbances, increased salivation and gastric secretion, nausea, vomiting, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis and optic atrophy), dryness of mouth, syncope or dizziness, epistaxis, purpura secondary to thrombocytopenia, asthma in susceptible persons, nasal congestion, weight gain, and impotence or decreased libido.

Usual Adult Dosage: Initially, 1 to 4 tablets daily for one week; maintenance, 1 to 2 tablets daily. When used with other antihypertensive agents, reduce dosage of both drugs about 50% and observe carefully for changes in blood pressure.

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Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

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Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

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Aspirin and Gastrointestinal Bleeding*

Thornton W. Merriam, Jr., M.D.**

Introduction

The observation that blood frequently appears in the stools of patients taking aspirin was first reported by Gregerson in 1916,[1] and later by Douthwaite and Lintott in 1938.[2] Since that time many articles describing gastric bleeding following aspirin ingestion have appeared in the literature,[3,4] and salicylate bleeding has been implicated as a cause of chronic blood loss anemia.[5,6]

Despite the abundance of reports on this subject, however, aspirin remains a common and often undetected cause of gastric bleeding. Aspirin is found in almost all American households; yet many people do not even consider it medicine. Frequently, on routine history, patients will not admit to taking aspirin unless they are questioned about it specifically.[7]

In this paper are described four cases of gastrointestinal bleeding which the author believes to be due to aspirin ingestion. A brief discussion and review follows.

Case Reports

Case No. 1: I. G. – This 76-year-old retired female school teacher was admitted to the hospital August 5, 1965, with hematemesis of several hours' duration. Her past history was unremarkable except for occasional indigestion requiring "soda," and a long history of headache for which she consumed aspirin, occasionally as much as two tablets every two hours. Her hematocrit was 33% on admission, prothrombin time 14 seconds (control 14 seconds), and her partial thromboplastin time was normal.

Several episodes of hematemesis occurred following admission, and her hematocrit fell to 24%. Transfusion of three units of whole blood produced a rise in the hematocrit to 33%. The situation then stabilized and she did well on a bland diet, antacids and anticholinergic medication. Gastrointestinal series, barium enema, and sigmoidoscopy were unremarkable. She was discharged from the hospital on a regular diet and abstinence from aspirin. Her hematocrit has been normal since that time, varying from 38 to 43% (follow up three years).

Admission history on this patient revealed intermittent use of iron and vitamins. The history of aspirin ingestion was obtained only later when she was asked about it specifically.

Case No. 2: G. B. – This 83-year-old unmarried female bookkeeper was admitted on March 10, 1966, with light-headedness of 3 weeks' duration, gradually worsening. A fainting spell occurred on the day of admission. A history was obtained of intermittent light-headedness, anemia, and sporadic use of oral iron preparations. There was a long history of chronic heartburn and gas and frequent use of antacids. She admitted to taking aspirin or an aspirin containing compound almost every day for mild rheumatoid arthritis.

Her hematocrit on admission was 22%, prothrombin time 15 seconds (control 14 seconds), serum iron 28 mcg/100ml., iron binding capacity 376 mcg/100 ml. A sternal marrow smear was normal except for diminished iron stores. Gastrointestinal series was negative except for a small intermittent hiatus hernia. Barium enema revealed only a few diverticula. Sigmoidoscopy was negative. A stool specimen on the day of admission gave a positive guaiac test.

Initially it was thought that her bleeding was from the hiatus hernia. She did well and was discharged on a bland diet, antacids and antispasmodics with elevation of the head of the bed. A flare of her arthritis occurred shortly after discharge and she began taking aspirin again. She then experienced an episode of hematemesis with a subsequent fall in her hematocrit to 32%. Following this occurrence she was told to abstain from aspirin, and has done well since that time maintaining an hematocrit in the range of 35% to 38%. She has been able to abandon the hiatus hernia program without difficulty, and no longer notes intermittent dyspeptic symptoms.

Case No. 3: M. B. – A 66-year-old housewife was admitted on October 29, 1965, for exacerbation of intermittent anemia of many years' duration. She had been treated in the past with various hematinics without significant effect. Recent symptoms had occurred following a respiratory infection which was treated with symptomatic therapy including four to six aspirin tablets daily. She also had a history of degenerative arthritis of the knee for which she had taken aspirin intermittently.

Her hematocrit on admission was 28%, serum iron 71 mcg/100ml., iron binding capacity 370 mcg/100ml. Sternal marrow was normal except for absence of stainable iron. Pro-

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thrombin time 14 seconds (control 14 seconds). Gastrointestinal series revealed a hiatus hernia. Barium enema and sigmoidoscopy were negative. Stools were positive initially for occult blood but became negative within a few days.

She responded well to bland diet, anticholinergics and antacids and was discharged. Since then she has maintained an hematocrit varying from 34% to 38%. The hiatus hernia program has subsequently been discontinued in view of the lack of dyspeptic symptoms, and she continues to do well on abstinence from aspirin.

Case No. 4: G. S. – An 83-year-old female was admitted on March 14, 1966, with two hours of light-headedness and nausea, with hematemesis shortly before admission. Past history revealed long standing arteriosclerotic heart disease and in 1959 she had had a sigmoid resection for an adenocarcinomatous polyp of the sigmoid without evidence of recurrence on subsequent examinations. She was taking digitalis, and four or five aspirin tablets per day for arthritis. Admission hematocrit was 29%. Prothrombin time 15 seconds (control 14 seconds). Partial thromboplastin time normal. The stools were guaiac positive initially but quickly became negative. Gastrointestinal series, barium enema, sigmoidoscopy were all negative.

The patient did well on a program of bland diet, antispasmodics, and antacids and was discharged in a few days with an hematocrit of 34%. On discharge she was given iron and instructed to abstain from aspirin but no other specific therapy was administered. She has done well since that time with a two-year follow-up, maintaining an hematocrit which varies from 41% to 45%.

Discussion

The frequency with which gastrointestinal bleeding follows aspirin ingestion has been commented upon by many investigators. Pierson et al[8] gave aspirin (2.4 gm. daily) to 148 volunteers and found significant amounts of blood in the stools in 73%. Similar findings have been noted by others.[4,9,10,11] The bleeding usually occurs in small quantities, about 3 to 5 ml. daily. This amount of bleeding is usually tolerated without difficulty but if continued for sufficient periods of time may be enough to produce chronic blood loss anemia.[1] Much more profuse bleeding occurs occasionally. Dyspepsia is a common symptom of aspirin ingestion but the symptoms appear to be unrelated to the presence or absence of bleeding.[11]

The mechanism by which aspirin produces bleeding is uncertain. Gastroscopy studies suggest that aspirin produces specific local areas of injury to the gastric mucosa by direct contact, and most authors feel that these sites of injury are the source of the blood loss.[3,12,13] The mucosal lesions consist of circumscribed areas of erosion of the mucosa penetrating into the muscularis. There is surrounding hyperemia in the submucosa with areas of hemorrhage varying in diameter from under a millimeter to 2.5 cm.[3,11,14]

Menguy offers a slightly different theory, suggesting that changes in gastric mucus secretion are responsible for gastric bleeding.[7] He states that these changes do not require the presence of the mucosal lesions. His studies indicate that aspirin injures the mucus secreting cells in the gastric mucosa, reducing production of mucus and exposing the mucosa to the action of proteolytic enzymes. This action in turn produces bleeding.

The possibility that aspirin produces gastric bleeding by inducing a bleeding tendency also deserves consideration. Aspirin in high doses may prolong the prothrombin time.[15] However, Pierson, et al[8] found insignificant changes in prothrombin time after administration of 2.4 grams of aspirin daily to 148 volunteers, and concluded that hypoprothrombinemia does not play a significant role in aspirin bleeding. A similar opinion is held by other investigators.[11,16] Quick[16] observed that administration of 1.3 grams of aspirin produces a change in the bleeding time, from control levels of 2-4 minutes to values of 4-7 minutes, two hours after aspirin. Confirmatory evidence is lacking, however, to substantiate Quick's suggestion that the prolonged bleeding time may play a role in gastric bleeding due to aspirin. Thrombocytopenia rarely occurs following aspirin ingestion, and is not a significant factor in most cases of gastric bleeding due to aspirin.[15] It is thus concluded that there is little if any substantial evidence that aspirin produces gastric bleeding by interfering with hemostasis.

Davis and Deller[17] recently studied the effect of aspirin on iron absorption. They postulated that aspirin might form a chelate complex having the effect of binding iron, reducing iron absorption and thus producing an iron deficiency anemia. However, they were unable to demonstrate an abnormality of iron absorption after aspirin, and concluded that the anemia of aspirin cannot be explained on this basis.

Another aspect of the problem of salicylate bleeding is the role of different types of salicylate preparations in the production of gastric bleeding. The previously described mucosal lesions are not produced when aspirin is present in the stomach at pH 8.0.[13] This suggests that gastric buffering, if adequate, will prevent the gastric bleeding produced by aspirin. However, the buffering ability of commercially available "buffered aspirin" does not significantly effect gastric pH.[16] In addition Grossman et al[4] found that significant and equal amounts of bleeding occurred with USP aspirin, enteric coated aspirin, sodium salicylate, and phenacetin, but that intravenous sodium salicylate produced significantly less bleeding. Pierson[8] similarly showed equal quantities of bleeding from standard USP aspirin, buffered aspirin, enteric coated aspirin and aspirin taken with milk or food. Relatively soluable forms of aspirin (calcium aspirin complex* and choline salicylate**) produced significantly less blood loss in Pierson's study, suggesting that these compounds might be preferable to standard aspirin under some circumstances. Other investigators, however, have been unable to confirm these findings.[1]

Several authors have indicated that chronic blood loss anemia due to aspirin ingestion occurs most frequently in young women,[1] possibly because of the presence of two sources of chronic blood loss. Pierson[8] showed that the greatest incidence of bleeding in test subjects was in young females, the reason for the latter finding being

* (Rx Calurin); ** (Rx Arthropan).

unclear. In the present report all four patients were elderly females. I have not attempted to present a statistical study and cannot quote a figure for incidence in the elderly. I should like simply to point out, however, that aspirin is commonly used by elderly people and gastric bleeding due to aspirin can occur. Unless a history of aspirin ingestion is specifically sought, it may go undetected, and the patient will suffer recurrent bleeding despite all other forms of therapy.

Aspirin is an effective agent, and an important part of our therapeutic armamentarium. The foregoing remarks should not be interpreted as condemnation of the use of aspirin. They are presented simply as a reminder of one of the possible hazards inherent in the use of this medication.

Conclusion

1. Gastric bleeding is a common complication of acute or chronic aspirin ingestion.
2. The type of aspirin preparation ingested has little effect on the frequency or amount of bleeding.
3. Significant bleeding can occur from aspirin ingestion without the presence of dyspeptic symptoms.
4. Aspirin bleeding should be considered in any case of occult upper gastrointestinal blood loss. A history of aspirin ingestion is easy to miss.

Summary

The cases of four elderly women are presented in which upper gastrointestinal bleeding was present and in which a history of chronic aspirin ingestion was obtained. The history of aspirin ingestion was often not obtained on admission interview but only after careful questioning. All four patients have done well since cessation of aspirin therapy.

Bleeding from aspirin ingestion occurs in about 70% of individuals who take aspirin. The bleeding is usually small in amounts but may occasionally be massive. Aspirin apparently causes local areas of mucosal erosion thus producing the hemorrhage. The type of aspirin preparation apparently does not effect the frequency or amount of bleeding. The importance of searching for history of aspirin ingestion in elderly patients with GI bleeding is stressed.

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Malabsorption Associated with Gluten Enteropathy,

Do Oral Contraceptives Interfere with Folate Metabolism?

Mason Trowbridge, Jr., M.D.,* Richard C. Wadsworth, M.D.** and Edward Moffitt***

A 33-year-old registered nurse and housewife was first seen by the senior author (M.T.) on 5-14-68 because of difficulty in swallowing and a "lump in the throat." This was worse during the middle of her menstrual periods but was never associated with Mittelschmerz. She also complained of vaginitis and of an aphthous stomatitis which first appeared in February 1967 and for which she had been treated with a vaccine and Atabrine. She stated that she was constantly dizzy and exhausted and that no one would believe that she did not feel well. She had noted a diurnal afternoon temperature elevation which frequently reached 101°F (oral). The patient had very little to say, during this interview, about her gastrointestinal problems. Throughout the interview she appeared confused and vague.

In 1958 the patient travelled in Europe and had diarrhea all summer. She was not disturbed about this but accepted it as a hazard which any tourist might encounter. In 1961 she was hospitalized because of anemia. At that time a gastrointestinal series and a barium enema were negative. In 1965 she developed intermittent diarrhea with from six to ten stools per day. The stools were watery and had a foul odor but there was no blood, mucus, or greasy material. Also in 1965 she is said to have had thyroiditis which was controlled by oral thyroid. Subsequent serum protein bound iodine and radioactive iodine uptake were said to have been normal.

The patient has a rather long history of anemia. In 1961, at the age of 26, she was referred to a hematologist because of an unexplained anemia with a hemoglobin of 8.4 gms./100 ml. Her father had had a splenectomy for congenital spherocytic anemia. Several other members of her family had been studied who showed anemia but no spherocytosis. A brother and an uncle have hyperbilirubinemia. When the patient was seen by a hematologic consultant (1961) her hemoglobin was 11.0 gms./100 mg; reticulocyte count 4.6%; normal serum bilirubin; normal serum protein and minimal changes in the red cell fragility test after 24-hours incubation. Her bone marrow showed slight erythroid hyperplasia. There was no evidence of blood loss from the gastrointestinal tract at that time. One year later her hemoglobin was 12.6 gms/100 ml.

In 1963 the patient had a normal, uneventful pregnancy. Subsequently she had a miscarriage. Her third pregnancy, in 1966, progressed quite normally up to the time of delivery. During this pregnancy her hemoglobin dropped to 10 gms/100 ml.; her reticulocyte count was 1.6%. At no time during the pregnancy did she develop hyperbilirubinemia. Her child was born on 2-18-66. Following delivery she experienced a rather severe hemorrhage and required transfusions totalling 1500 ml. of whole blood. She subsequently developed a rectovaginal fistula. A repeat red cell fragility, after transfusions, showed a slight increase in fragility. In May of 1966 her hemoglobin was 10.9 gms/100 ml and the tip of her spleen is said to have been palpable. In May of 1966 the patient began to use oral contraceptives Her stomatitis recurred and she continued to have episodes of explosive diarrhea. There seemed to be a definite association between the diarrhea and the use of Ovulen.® On two occasions, when she stopped the Ovulen, the stomatitis cleared up promptly and the diarrhea disappeared. In 1967 she changed to Enovid-E® which was not associated with the severe diarrhea which she had previously experienced but she did feel that this preparation caused some lassitude.

In June of 1966 her hemoglobin was 10.7 gms 100 ml. She was then placed on iron therapy which was continued for six months. She stopped taking the iron because it exaggerated all of her gastrointestinal symptoms. In December of 1966 her hemoglobin had risen to 11.4 gms 100 ml.

In February of 1967 she felt quite well except for general malaise and fatigue which prevented her from carrying on her housework. Physical examination showed no striking abnormal findings. There was no demonstrable splenomegaly, hepatomegaly, or lymphadenopathy. Her hemoglobin was 12.8 gms/100 ml; hematocrit 40.5%; platelet count 300,000/mm^3; reticulocyte count 0.6%; leukocyte count 6,500/mm.^{3} and a normal differential count. There was no demonstrable spherocytosis. There was, however, a rather marked degree of anisocytosis and occasional hypersegmented polymorphonuclear leukocytes were noted on the smear. An osmotic fragility test, with incubation, showed a normal curve. Her serum iron was 40 mcg/100 ml. Screening tests for pyruvic kinase deficiency and for glucose -6-phosphate dehydrogenase deficiency were both negative. Hemoglobin electrophoresis studies showed A_2 was 1.5% and F was 2.5%. A cytology smear was reported as Class II –III, atypical.

Around the first part of January 1968 the patient noted areas of ecchymosis appearing on her lower extremities and she complained of recurring cramps in

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her legs. In February 1968 her hemoglobin was 11.1 gm/100 ml; hematocrit 36%; leukocyte count 4,500/mm^3; platelets 356,000/mm^3; bilirubin less than 1 mg/100 ml; reticulocyte count 0.5%; red cell fragility, incubated, normal; serum iron 226 mcg/100 ml.

In June of 1968 she was admitted to the Eastern Maine General Hospital because of fever of undetermined origin, lassitude, dysphagia, vaginitis and mild intermittent diarrhea. Her hematocrit was 37%; leukocyte count 3000/mm^3; platelet count 180,000/mm^3; thrombofax normal; prothrombin time 15 seconds (control 14); screening test for glucose -6- phosphate dehydrogenase deficiency negative; L.E. preparations negative; antinuclear factor 1:4. A gallbladder series and a gastrointestinal series were both reported as normal. The bone marrow was initially interpreted as being consistent with a partially compensated hemolytic anemia. There was no stainable iron in the bone marrow sections. A skin and muscle biopsy were reported as negative. A hematologic consultant reviewing the bone marrow slides noted a definite maturation arrest and suggested the possibility of a drug-induced leukopenia. A bone marrow culture showed no growth. The serum B_{12} levels was 238 picograms/ml (N = 200-800 pg/ml). The serum folate level was less than 1 nanogram/ml. (N = 5-25 ng/ml). When this latter determination was reported, the patient was given folic acid (5 mg t.i.d.). Within ten days after this therapy was instituted the WBC rose to 5,280/mm^3 and her platelets rose to 278,000/mm^3. A urinalysis on this admission showed clumps of pus cells. A culture revealed a colony count in excess of 10,000/cm^3. Following folic acid therapy the vaginal cytology was reported as class II, negative and the ecchymosis of the legs disappeared.

In late July of 1968 she was again admitted to the Eastern Maine General Hospital because of an explosive diarrhea, which was thought to have been due to overexertion the day prior to admission, on which day she had done four large washes, had cleaned her entire house, had made two visits to the local shopping center, had prepared the meals for her family and had played baseball after supper. Her only symptom which had not been relieved by the administration of folic acid was flatulence. Her xylose absorption test in August 1968 showed 1.8 gms. in five hours following ingestion of 25 gm. of d-xylose. Her butterfat absorption over five hours was very low, viz, .005, .010, .020, .015 and .016. She was placed on a gluten free diet in August 1968. Since the onset of treatment with both folic acid and a gluten-free diet she has gained ten pounds and has remained symptom free. A jejunal biopsy was not done. Since being on folic acid therapy she has been mentally alert and at times has had her physician on the defensive by asking penetrating questions which revealed a superior understanding of the malabsorption syndrome.

Discussion

The gastrointestinal tract is often the target of stress in the lives of our patients. As noted by Lindner[1] the term "malabsorption syndrome" is a broad one which permits a number of interpretations and may include not only steatorrhea but other clinical features and various deficiency states including lack of folic acid, vitamin B-12, iron, calcium or magnesium. Megaloblastic anemia, secondary to a deficiency of either vitamin B_{12} or of folic acid, or hypochromic anemia due to iron deficiency may be present in the malabsorption syndrome. The presence of the malabsorption syndrome should be suspected when vague abdominal symptoms are accompanied by:

1. Hematologic abnormalities such as leukopenia, pancytopenia or of the presence of multilobed polymorphonuclear leukocytes in the peripheral blood smear.
2. Stomatitis and dysphagia.
3. Muscle cramps.
4. Lack of mental acuity.
5. Ecchymoses or some other bleeding tendency.

The majority of the above signs and symptoms are reflections of folic acid deficiency which are listed in the monograph of Sheehy and Floch.[2]

We have observed a number of patients, chiefly with alcoholism or rheumatoid arthritis who have shown a severe leukopenia. In such cases both serum folate and vitamin B_{12} assays should be done. If the patient's condition is alarming both vitamins may be administered simultaneously. Many of these patients may prove to have normal serum levels of both folate and B_{12}. Since the prognosis is often so grave in many patients presenting with a severe leukopenia, the few patients who do respond dramatically to folic acid therapy would seem to make this type of treatment worthwhile. The hazard of treating an unrecognized pernicious anemia patient with folic acid is minimized if the serum vitamin B_{12} assay is done. Pernicious anemia can subsequently be ruled out by a Schilling test.

The presence, in this woman, of multilobed polymorphonuclear leukocytes, noted in February 1967, should probably have been a clue to this patient's fundamental diagnosis. Herbert[3] has stressed the importance or noting this readily observed hematologic abnormality.

This patient had an abnormal Papanicolaou smear of the cervix. Atypical cytology smears have been reported in patients with vitamin B_{12} deficiency or with folic acid deficiency.[4] An atypical cytology smear should not, however, be casually explained by attributing the atypicality to a possible deficiency disease. Investigation should follow to attempt to pinpoint the significance of the atypical cells.

There appears to be a relationship between the metabolism of folic acid and the metabolism of iron. Iron metabolism may be abnormal in the megaloblastic anemia of folate deficiency, but the mechanism is unknown.[5]

There is also an apparent relationship between folic acid metabolism and progesterone levels in pregnancy.

The low serum "folic acid" levels of women in the latter half of pregnancy, after an oral dose of folic acid have been interpreted as due to impaired absorption of this vitamin.[5] Herbert[3] suggests an alternative explanation that rapid uptake by the fetus may be responsible for the low measurable levels in the mother. In a preliminary report Shojania et al[6] have shown that a group of women on oral contraceptives showed a significantly lower serum folate level than that obtained in a control group of women. They also showed that the in-vitro addition of oral contraceptives failed to have any inhibitory effect on the growth of Lactobacillus casei. This suggests that the low serum folate levels are associated with the pseudopregnancy state induced by elevated progesterone levels.

Summary

A 33-year-old housewife is presented with a protracted history of diarrhea, muscle cramps, stomatitis, vaginitis, poor cerebration, ecchymoses, possibly poor wound healing and postpartum hemorrhage. She was shown to have both folic acid deficiency and iron deficiency associated with her malabsorption syndrome.

Much human suffering and medical expense could be avoided by increased attention to the recognition of folic acid deficiency. Its association with the malabsorption syndrome should not be overlooked.

The ingestion of oral contraceptives may be a factor in the production of low serum folate levels.

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NATIONAL CONFERENCE ON BREAST CANCER

The National Conference on Breast Cancer will be held at the Shoreham Hotel in Washington, D.C. on Thursday, Friday and Saturday, May 8-10, 1969. A multidisciplinary review of the breast cancer problem in the United States will be presented including epidemiology, etiology, detection, diagnosis, management and control measures. Disappointing as well as successful approaches in combatting the disease will be discussed in an effort to identify possible directions for future progress.

May 8, 1969

Epidemiology, Causation and Pathogenesis

Current Control Measures and Their Effectiveness

May 9, 1969

Changing Concepts in Detection and Diagnosis

Research, Resources and Possible Developments For the Control of Breast Cancer

May 10, 1969

Management of Operable Cases

Management of Inoperable Cases

Infected Aortic Prosthesis

Report Of A Case With Subsequent Recovery

DAVID M. SENSENIG, M.D.*

An infection occurring in an aortic prosthesis is one of the most serious complications that can ensue following arterial grafting. Septicemia and secondary hemorrhage threaten life, and eradication of infection is difficult to achieve. Because of the difficulties inherent in the problem and the low incidence of successful outcome, it is thought that the following case report would be of interest.

REPORT OF A CASE

First admission – A 67-year-old white man, a retired bridge engineer, was admitted to the Surgical Service, Philadelphia Veterans Administration Hospital on June 7, 1963. On February 4, 1963, at another hospital a woven Teflon prosthesis had been placed joining the aorta just below the renal arteries to the common femoral artery on the left, common iliac artery on the right, following resection of a ruptured abdominal aortic aneurysm. The left iliac artery was sclerotic and not suitable for insertion of the graft. Six weeks later an infection made a delayed appearance in the left groin incision. Hemorrhage from the suture line occurred. On March 28, 1963, the distal part of the left limb of the prosthesis was removed and the femoral artery ligated without precipitating gangrene. Cultures revealed Staphylococcus aureus sensitive to Staphcillin® and Chloromycetin.® On May 10, 1963, more of the left limb of the graft was excised through a left lower quadrant extraperitoneal incision which was left open. The prosthesis contained purulent material and thrombus.

Physical Examination – The patient was a normally developed slightly obese man with a normal temperature and a blood pressure of 140/90. The long mid-line incision was well-healed, but there was a short transverse wound in the left lower quadrant packed with iodoform gauze and a similarly packed wound in the left upper thigh. There was no femoral pulse on the left, but one was present on the right. No pulses were palpable on either side in the popliteal area or in the feet. Both legs had adequate temperature, and there were no trophic changes.

Laboratory and X-ray Findings – On admission the laboratory studies were as follows: hemoglobin, 13.7 gm./100cc; hematocrit, 40%; white blood cell count, 8700 cells/cc; differential count normal. Urine analysis, fasting blood sugar, blood urea nitrogen, serum electrolytes, prothrombin time, and serology were all within normal limits. Electrocardiogram was borderline normal showing decreased ST segments and slight T wave flattening. A chest roentgenogram was normal. Wound culture revealed Staphylococcus aureus, coagulase positive, sensitive to Staphcillin, Chloramphenicol, and Novobiocin.

Course in Hospital – On June 17, 1963, through a left lower quadrant transverse transperitoneal incision, the infected left limb of the graft was removed back to the bifurcation. The left limb was closed with 5-0 Tevdek sutures. The left limb contained pus, and there was infected granulation tissue around the bifurcation of the graft. The right limb of the graft was pulsating normally. A left lumbar sympathectomy was done removing the second and third lumbar ganglia. Postoperatively the patient was treated with Dimocillin for 22 days. The patient was also given an eight-day course of Chloromycetin. Following discontinuance of the antibiotics his temperature remained normal. All wounds healed well. The patient was discharged on July 11, 1963, with instructions to take Kynex® 500 mg. by mouth daily. At that time he had no paresthesias or claudication.

Second Admission – Because of chills, fever, severe muscle spasms in the back, and pain in both legs of one-month's duration, the patient was readmitted on November 6, 1963. Physical examination was as before except for a temperature of 102°F. and a breakdown in the incision in the left inguinal area.

Laboratory and X-Ray Findings – Wound culture, urine culture, and blood cultures all showed Staphylococcus aureus sensitive to Novobiocin, Chloromycetin, and Resistopen. Intravenous and later retrograde pyelography showed medial displacement of the left ureter and changes of pyelonephritis in the right kidney. Chest x-ray was normal. Serum bilirubin was 1.3 mg. per 100 cc, total protein 8 Grams per 100 cc, 3 Grams % albumen.

Course in Hospital – Cystocopy was normal. Because of the development of weakness in both legs with hyperesthesia and paresthesia of the lumbar segments, the patient was seen in consultation by the neurosurgeon. It was concluded that the patient was suffering from a bilaterial infectious femoral neuritis secondary to retroperitoneal infection.

Operation was performed on November 26, 1963. Adherent duodenum was reflected from the graft evacuating 30 ml of turbid fluid from an abscess which seemed to be localized at the bifurcation of the graft. After lavaging the field with Staphcillin, a T-tube was brought out from the area. Irrigations with Staphcillin were carried out through the T-tube in the postoperative period. The patient was also given Staphcillin by intramuscular injection despite a suggestive history of allergy.

On December 16, 1963, definitive operation was carried out through a long mid-line incision. The previous upper anastomosis was just below the left renal vein. If there was any infection at that level, it was thought that it would involve the new graft whether or not a small piece of Teflon was left in. Accordingly the new Dacron graft was anastomosed end to end to the old Teflon graft leaving only a short segment in situ. This maneuver facilitated the upper anastomosis. The graft was brought down retroperitoneally on the right and anastomosed to the right common femoral artery. The right superficial femoral artery was narrow and sclerotic. The cecum and ascending colon were sutured back over the graft excluding it within the paraspinal area. The old Teflon graft was removed and the common iliac artery ligated. The old infected area at the aortic bifurcation was drained.

Postoperatively the patient became confused and disoriented. He developed hematemesis four days postoperatively. This subsided with continuing Levin tube gastric suction. When the patient developed a rash from Staphcillin, it was discontinued. He developed fever due to a urinary tract infection which responded to Coly-Mycin®. Blood culture was positive for E. coli. The patient's condition improved progressively so that he could be discharged on January 20, 1964, on Kynex 500 mg., by mouth daily, to suppress any bacterial activity.

The patient has continued to do well. He was admitted for

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a 10-day period in August, 1965, because of some subxiphoid pain relieved by sitting up and oral antacids. At that time he had mild rubor in both feet and no palpable popliteal or foot pulses. His left foot remained warmer than the right as a consequence of the sympathectomy. There was no left femoral pulse, of course, but a good right femoral pulse. An upper gastrointestinal series of x-rays showed a diverticulum of the mid-esophagus and no hiatus hernia. In December, 1966, the patient could walk four blocks with no symptoms. Complete blood count was normal. Kynex was discontinued.

At present the patient can walk five blocks on an upgrade without stopping. He regularly plays nine holes of golf and recently played 14. He has no evidence of any infection and is cured of his problem.

Discussion

In general when a foreign body is infected it must be removed to cure the problem. Infected prosthetic grafts in the thighs have been controlled by early debridement, topical antibiotics instilled through a catheter, delayed wound closure, and appropriate systemic antibiotic therapy. At Walter Reed General Hospital these methods have proved to be very helpful.[1] The problem is different in the abdomen where such methods are less practical. Robert Shaw[3] has placed a new graft retroperitoneally with success in a manner similar to this case. Shaw emphasizes that sepsis does not run up and down an unthrombosed arterial graft but remains around its point of origin. On the other hand, sepsis does travel up and down a thrombosed graft. He believes that "ideal surgical treatment of a chronically infected arterial reconstruction involves: a. Isolation and defunctioning of the infected segment by division of the uninfected artery or graft proximally and distally through clean incisions. b. Exclusion of the ends of the defunctioned segment from these clean fields. c. Restoration of vascular continuity by bypass graft around the septic region. d. Standard treatment of the infected segment by drainage, removal of foreign body, etc., after the clean incisions have been closed and protected."

Surgeons recently have recommended the bilateral placement of an axillary artery to femoral artery graft with the total excision of the infected graft and closure of the aorta below the renal arteries. Later on, a new graft from the lower thoracic aorta or the abdominal aorta can be placed in a new retroperitoneal location and the axillary by-pass grafts removed. We have no experience with this method, but it appears that it may prove helpful in cases of this type.

Prevention of infection is desirable in any grafting procedure. Meticulous skin preparation including preoperative pHisoHex® washes would appear to be a good idea. Careful technique at operation with minimal trauma and avoidance of hematomas, avoidance of unnecessary personnel in the operating room and excessive talking all should help. Prophylactic antibiotics after the placement of a prosthetic graft is advisable even though all vascular surgeons would not agree. Drains are to be avoided unless oozing is not controllable. When the wound is closed no new bacteria can gain entrance. Adequate antibiotic therapy for a week postoperatively may kill off the bacteria which have gained entrance so that infection, which so frequently is disastrous, may be avoided. It should be appreciated that some aneurysms are infected at the time of resection. Sommerville and associates[4] found 6 infected aneurysms out of 178 found from a study of 20,201 autopsies at the Mayo Clinic. Foster and associates[2] carried out grafting in dogs in the presence of an established abscess, and also in another group contaminated the grafts at the time of operation. Their experimental study showed that it is possible to neutralize infection with sufficient antibiotic therapy.

When infection occurs in an abdominal aortic graft, drainage of pus, irrigation with antibiotics plus systemic antibiotics, and later excision of the infected graft followed by placement of a new graft in a non-infected bed may retrieve an otherwise fatal situation. Such an approach in the case reported herein was effective in curing the patient.

Summary

A case of infected abdominal aortic Teflon graft has been presented. Despite abscess formation around the graft with resulting positive blood cultures, the patient was cured by drainage and later regrafting in a new retroperitoneal location. The principles involved in the care of such cases are discussed.

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Histologic Observations in a Case of Mikulicz's Disease

Pierre Le Noac'h, M.D.*

On February 18, 1968, a 51-year-old salesman was first admitted to the Eastern Maine General Hospital, with the chief complaint of a mass in his right parotid gland. About seven months prior to admission, the patient first discovered that he had a small lump in the angle of his right mandible. This had been totally asymptomatic, and he felt that it had not grown appreciably during the seven months period of observation.

On physical examination, two months prior to admission, it was first noted that there was a small nodule in the para-auricular area, suggesting an enlarged lymph node. This also had been asymptomatic, and the patient was firm in his denial of any infection about the ear or scalp. The patient had no past history of serious illnesses or operations. There was no known history of any familial disease.

A system review was totally unremarkable. On physical examination, the nose, eyes and ears appeared to be normal; there were no signs of recent infection. The right parotid gland contained a well defined mass measuring approximately 1.5 cm. in diameter; this seemed to move with the rest of the parotid structure. There was no facial weakness. There was one possible small lymph node adjacent to the parotid gland. The rest of the physical examination was noncontributory; the patient appeared to be in good health.

Laboratory Data:

His urinalysis was within normal limits with 2-4 leukocytes per high power field. His hematocrit was 46%. The leukocyte count was 11,800/mm^3 with 64% segmented neutrophils, 4% bands, 2% eosinophils, and 30% lymphocytes. The fasting blood sugar was 92 mg/100ml. and the urea nitrogen was 17 mg/100ml. The VDRL was negative.

On February 19, 1968, the superficial lobe of the right parotid gland was removed; this seemed to include the mass which could be felt within the parotid; two small preauricular lymph nodes were encountered and were included with the specimen. The gross appearance of the parotid, as well as of the small lymph nodes, was more suggestive of a chronic inflammatory process than of a neoplasm. The facial nerve and its branches were identified by the galvanic stimulator and were preserved.

Pathology:

1. Gross:

The specimen received consists of a flattened, roughly oval-shaped, irregular mass of moderately soft tissue which displays an irregular, bluish-red, red-brown, tan and yellow outer surface. The overall specimen measures 6.1 x 4.3 x 1.7 cm. At one point of the outer surface of the specimen, there are attached two very small nodules of moderately firm yellow-tan tissue; they are identified by the operating surgeon as preauricular lymph nodes. The larger measures 0.5 x 0.3 x 0.3 cm. Another small probable lymph node is attached to the outer surface of the anterior portion of the parotid tissue received. This nodule measures 0.6 cm. in average diameter. It is slightly embedded in the lobules of fat partly covering the specimen. The cut surface of the parotid gland is tan in color, with some foci of reddish-brown discoloration. The general pattern is finely lobular, and the consistency generally soft, except in the anterior portion of the specimen where there is a moderately large, firm, somewhat rubbery, roughly nodular lesion which measures 2 cm. in greatest diameter, and 1.3 cm. in smallest diameter, and which grossly appears to be completely excised. Its cut surface is grayish-pink in color and with an 8x magnifier, it appears to be surrounded by a thin capsule of membranous tissue. While sectioning the posterior portion of the parotid gland, underlying the two small preauricular lymph nodes, two additional yellow-pink nodules are disclosed within the glandular tissue; each measures 0.8 cm. in average diameter.

2. Microscopic Examination:

The microscopic study of numerous sections led to the final diagnosis of Mikulicz's disease. Multiple sections of the specimen show the parotid gland to consist partly of normal gland tissue, and partly of adjacent masses of lymphoid tissue – presenting a lobular pattern (Fig. 1). Generally, the gland retains a normal lobular pattern. However, many lobules which are infiltrated by lymphoid tissue appear to be much larger than normal. All lobules are separated by fibrous septa which show some variation in thickness, but which tend to be rather thin (Fig. 2). Some of the gland lobules measure nearly 1 cm. in diameter and are partly or entirely infiltrated by a sea of lymphoid cells, mostly mature lymphocytes, among which remain, here and there, some atrophic serous acini. Generally, the most enlarged lobules show a loss of acinar tissue, with replacement by diffuse lymphoid tissue in which there are no well circumscribed lymph follicles. When occasional lymph follicle-like structures are observed, they have no germinal centers, and their margins are ill-defined. Lymphoblasts and prolymphocytes are rather frequently observed among the mature lymphocytes, but they are scattered at random in a sea of lymphocytes, sometimes grouped in minute nests or streams of immature lymphoid cells. The lymphoid tissue appears always limited by the lobular septa; generally, the lobular septa are not penetrated or transgressed by lymphoid cells spreading from one lobule to another. In some lobules, which show only

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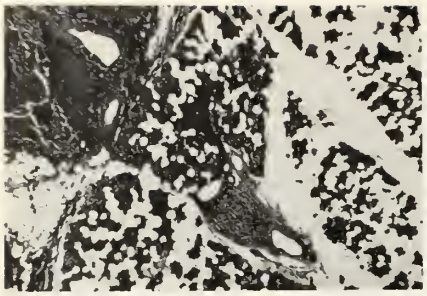


Fig. 1. Section of parotid gland to show masses of lymphoid tissue in lobular distribution. The lobules are separated by fibrous septa. The lobular pattern of the parotid is well preserved. The usual parotid adipose tissue is obliterated in the involved portion of the parotid. H&E X 21.

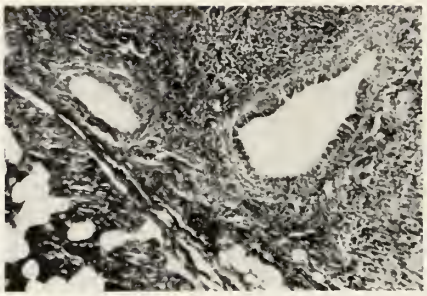


Fig. 2. Higher magnification of a portion of Fig. 1. The fibrous septa are well defined. The diffuse lymphoid infiltration is readily identified. Hyperplastic changes are readily observed in duct epithelium. H&E X 60.

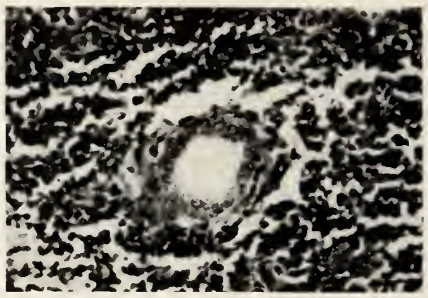


Fig. 3. Details of dense lymphocytic infiltration surrounding a small duct which shows slight proliferation of lining epithelium. H&E X 258.

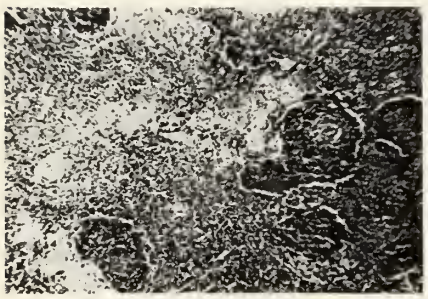


Fig. 4. Advanced lesion of Mikulicz's disease to show multiple small hyalinized nests. Note that lymphocytes are less dense in these areas. H&E X 60.

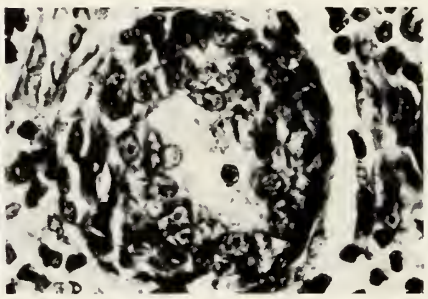


Fig. 5. Parotid duct showing narrowing of the lumen, hyperplasia of lining epithelial cells, hyperplasia of myoepithelial cells and prominence of nucleoli of the lining epithelial cells. H&E X 582 (oil immersion).



Fig. 6. Excretory duct showing stratification of nuclei in the epithelial lining. Note variation in size and chromatin content of nuclei. H&E X 258.

partial infiltration by lymphoid cells, the lymphoid involvement appears to start more-or-less centrally in the lobule, with a peculiar arrangement around the intercalary and the striated ducts (Fig. 3). Occasionally, there is also involvement of the larger excretory ducts which appear to be surrounded by a nodular mantle of lymphocytes simulating a lymphoid nodule. Even when such an excretory duct lies within the thickened interlobular connective tissue, the lobular structure of the parotid tissue remains preserved (Fig. 1). Extravascular polymorphonuclear neutrophils and eosinophils are not found. Plasma cells are not rare, but they are observed only in the immediate vicinity of certain ducts and in certain areas which will be described later. In areas where the lymphoid cells appear to compress and replace the serous acini, the acinar epithelial cells contain dark granular cytoplasm and hyperchromatic nuclei. A striking feature of the gland lobules infiltrated by the lymphoid cells is the total loss of the usual fatty tissue (Fig. 1). In one area of the specimen, there are noted multiple nests of hyaline substance, often closely adjacent to each other and occupying the stroma which supports the sea of lymphoid cells. In such an area, the lymphocytes appear to be less closely packed (Fig. 4).

In addition to the parenchymal changes in this parotid gland, there are striking changes in the ducts characterized by various degrees of hyperplasia of their lining epithelium as well as of their myoepithelial cells (Fig. 5). The latter are numerically increased and are more prominent than usual; however, the hyperplasia of the lining epithelial cells is usually more striking. In many ducts, the stratification of the nuclei is accompanied by a loss of polarity with disorganization of the epithelial cells and by some morphologic changes of the nuclear and cytoplasmic components (Figs. 5, 6, 7, 8). The ductal lumina show various degrees of narrowing, associated with the progressive thickening of the duct wall, up to the stage of total obliteration of the lumen, thus leading to the formation of the typical "epimyoepithelial" islands, (Figs. 7, 8), so well described in the classical article of Morgan and Castleman in 1953.[2a]

In our specimen, these "epimyoepithelial" islands appear to be fairly numerous in some sections where they are observed lying in a "sea" of lymphoid tissue (Fig. 9). When tangentially cut, these epimyoepithelial islands appear as short solid cords. The basement membrane is always intact. The size of the altered ducts is generally increased, often markedly so. Mitoses in the

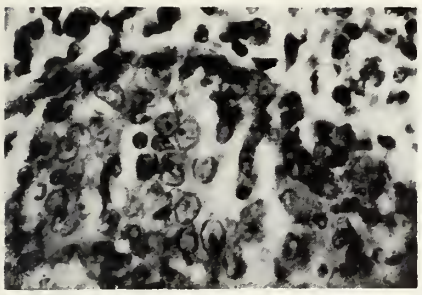


Fig. 7. Detail of epimyoepithelial island. The duct is completely obliterated. Occasional plasma cells are noted at the periphery of duct. H&E X 582 (oil immersion).

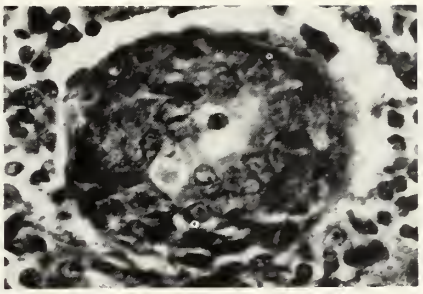


Fig. 8. Epimyoepithelial island showing deposition of hyaline material among hyperplastic lining epithelial cells. A few plasma cells are present at the periphery of the island. H&E X 582 (oil immersion).

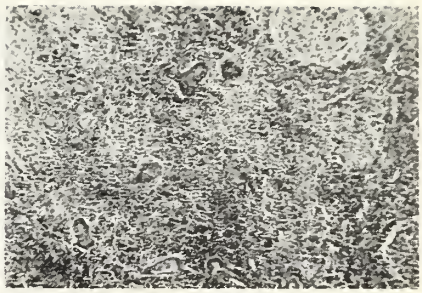


Fig. 9. Low power photomicrograph to show epimyoepithelial islands irregularly distributed in a sea of lymphocytes. H&E X 60.

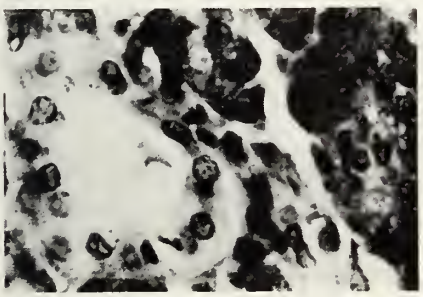


Fig. 10. High power magnification of duct to demonstrate the infiltration of numerous plasma cells about the periphery of the duct. Although the epithelial lining cells appear active, there is little evidence of hyperplasia. H&E X 582 (oil immersion).

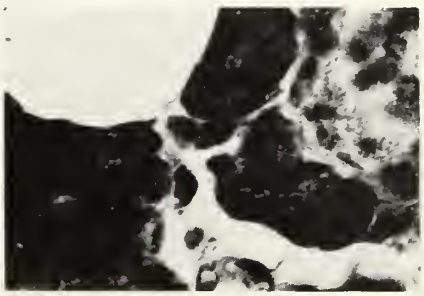


Fig. 11. High power magnification to demonstrate plasma cells infiltrating between acini and ducts. The larger duct shows definite evidence of epithelial hyperplasia, from an area where adipose tissue remains and where lymphocytic infiltration has not occurred. H&E X 582 (oil immersion).

epithelial cells are infrequent. Some epimyoepithelial islands show deposition of a hyaline substance which generally seems to be arranged in small extracellular masses (Fig. 8), although in some areas, there seem to be intracellular drops of hyaline. As a result of the alterations of the epithelial cells in these solid islands, especially the ill-defined cytoplasmic borders, the exact positional relationship of these cells with the hyaline material is as poorly defined as is the relationship between one cell and another.

The changes seen in the larger extralobular ducts are often similar to those observed in the smaller intercalary ducts, but obliteration of the lumen is not observed in the extralobular ducts.

Some areas of the lesion show hyaline deposits which suggest that the total duration of the disease process exceeds the known clinical history of seven months' duration. According to Morgan and Castleman,[2a] there appears to be a definite correlation between the degree of duct alteration, especially the intraductal hyaline deposition or the replacement of the duct by hyaline, and the clinical duration of the disease.

A finding of interest to the author is the frequent presence of plasma cells forming loose collections or scatterings around the basement membrane of many of the ducts (Figs. 8, 10, 11). Where the ducts show advanced alterations and are surrounded by a sea of crowded lymphocytes, the plasma cells are inconspicuous, being squeezed between the lymphocytes and the basement membrane of the ducts (Fig. 7). Their presence, however, is quite conspicuous around those ducts, either intralobular or extralobular, which are seen in areas still relatively spared by the pathologic process, but which are found closely adjacent to pathologic gland lobules, or which already show some early infiltration by the lymphocytes. The plasma cells suggest "avant-garde" elements sneaking their way between the acini toward normal appearing ducts or toward ducts showing only very early epithelial changes (Figs. 8, 10).

The small nodules which were attached to the outer surface of the parotid gland or contained within its posterior portion, microscopically consist of lymphoid tissue, but the architectural pattern is rarely that of a true lymph node. They are rather nodular masses of lymphocytes, surrounded by fatty tissue and glandular acini, in which there are focal areas of partial ill-defined merging with the surrounding serous acini. Sometimes these nodular masses contain serous acini and ducts showing various degrees of alteration, generally mild to moderate.

Within the posterior portion of the parotid gland, however, one true lymph node is identified; it contains occasional serous acini located peripherally at one pole, and multiple ducts, many of which show fairly advanced pathological changes, approaching the formation of epimyoepithelial islands. The presence of acinar tissue and glandular ducts in lymph nodes in the vicinity of the parotid gland is an embryologically explained normal finding. An excellent review of the pertinent embryological contributions in this field by Shulte, Keibel and Mall, Neisse, Thompson and Bryant, Nicholson, Bonifazi and Plaut was published by Goodwin in 1952.[8]

The striking abnormality consists of the changes seen in the parotid ducts. It should be noted, however, that the lymph follicles fail to show well defined germinal centers, and the medullary zone is not identifiable, being replaced by a sea of crowded lymphocytes.

A second true lymph node is identified in the small nodular structure grossly observed on the outer surface of the anterior portion of the parotid gland. This node also contains acinar tissue and ducts, but the latter do not show any appreciable pathologic change.

All other structures simulating lymph nodes are merely lobular masses of lymphoid tissue showing the peculiar pathologic changes previously described.

Discussion

Our interest in Mikulicz's disease[1] is stimulated by its relative rarity, its obscure etiology, and the problems of differential diagnosis which may arise when such a case is encountered. However, in cases of chronic parotitis, adenocystoma lymphomatosum, metastatic carcinoma, and malignant lymphoma, the typical microscopic features ascribed to Mikulicz's disease are not found. The "epimyoepithelial islands" constitute a unique feature, pathognomonic of Mikulicz's disease and the intimately related Sjögren's syndrome.

There appears to be a close relationship between Mikulicz's disease and Sjögren's syndrome. Mikulicz's disease, as in the patient described above, is usually manifested by chronic, asymptomatic, diffuse or nodular enlargement of one or more salivary or lacrimal glands. It is usually confined to one salivary gland – most often the parotid; multiglandular or bilateral involvement is less frequent. Sjögren's syndrome consists of a triad of symptoms; viz: keratoconjunctivitis sicca, xerostomia and recurrent swelling of the parotid glands. In fifty percent of the patients, the triad of symptoms is accompanied by rheumatoid arthritis.[3] There are identical histologic features in the salivary glands in each of these entities.[2b] It appears likely that they may be clinical variations of the same fundamental disease process.

There is some indication that the pathogenesis of these two syndromes, like Hashimoto's thyroiditis, may be associated with antigen-antibody complexes as a manifestation of autoimmune disease. As early as 1958, Jones[4] suggested that some cases of Sjögren's syndrome might be a specific autoimmune aberration, analagous to that demonstrated in Hashimoto's disease. He also called attention to the elevated gamma globulin levels in patients with Sjögren's syndrome. Since then, others[5,6,7] have given support to this theory.

In the slides prepared from the parotid gland of the case here presented, there is a suggestion that plasma cells form an "avante-garde" along the advancing borders of the lesion where the parotid ducts show minimal epithelial changes. As the ducts become more markedly involved by the pathologic process and the acini become destroyed, the predominant reacting cell is the lymphocyte. The observed histology appears to be compatible with what one might expect if the pathogenesis of this disease is associated with autoimmunity.

Summary

A case of Mikulicz's disease is presented with observations of the pathologic changes in the parotid gland. The histology of the parotid lesion appears to support the concept that autoimmunity may play a part in the pathogenesis of this disease.

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Serum Isocitric Dehydrogenase

UV Method with NADP

GENARO A. LOPEZ, M.Sci.* and HAROLD P. DUNN**

COMMENT

The article in this issue of the Journal by Lopez and Dunn is indicative of one way in which a pre-medical student can profitably spend his summer in a small regional hospital where there is an opportunity to become acquainted with one of the basic sciences such as biochemistry with particular emphasis on enzymology and instrumentation. Such an experience is valuable to the student by illustrating, in a somewhat limited but increasingly important field, the correlation of the theoretical background of his college program with its application to the understanding and diagnosis of disease. We believe that this type of program may be helpful in encouraging college students to join the ranks of the medical profession.

R.C.W.

INTRODUCTION

Isocitric dehydrogenase (threo – Ds – Isocitrate: NADP oxido-reductase, EC #1.1.1.42) is a nicotinamide-adenine dinucleotide phosphate (NADP) dependent enzyme of the Citric Acid cycle. The enzyme catalyzes, in the presence of Mn^{++}, the oxidation of isocitrate to alpha-keto glutarate and carbon dioxide.

ICD activity has been shown to be elevated almost exclusively with diseases of the hepatobiliary system. It is particularly useful in the detection of inflammatory, necrotic or malignant liver diseases, whereas near normal values are obtained in conditions such as cirrhosis and obstructive lesions. The method employed for our studies was essentially that of Wolfson and Williams-Ashman,[21] modified by Bowers.[4] This is an ultraviolet procedure, measuring the formation of reduced NADP at 340 mu.

In our work, determinations were run at 30°C., as suggested by the International Union of Biochemistry.[9] This was opposed to the standard 25°C., at which most previous investigations were run. This temperature change, plus slight modifications in the proportions of reagents used and elimination of a serum blank, made it necessary to determine a new set of normal values for the activity of the enzyme on a sample of hospital employees. The stability of the enzyme under refrigeration, and its proportionality on dilution were also investigated.

The purpose of our studies was to determine a normal range of ICD activity in healthy hospital workers, under continuous recording spectrophotometry and controlled conditions of temperature and reagent concentration. If properly interpreted, the test should allow useful differential comparisons to be made with SGPT determinations in hepatobiliary diseases, and hopefully it will prove to be an important diagnostic tool in the clinical laboratory.

LITERATURE REVIEW

The ultraviolet measurement of ICD activity was developed by Wolfson and Williams-Ashman[21] in 1957, and Bowers[4] slightly modified it later, to more adequately meet the needs of a clinical laboratory. The enzyme activity in animal tissues is known to be NADP linked and requires Mn^{++} as an activator.[18,19,20,21] These conditions must also prevail in the test system.[20] The enzyme is very stable when refrigerated at 4°C., but freezing can decrease its activity ten to twenty-five %.[4] The enzyme is stable at least five hours at room temperature.[13] A second form of the enzyme which is NADP dependent also exists,[18,19] and has been found in high concentrations, particularly in the placenta.[16]

The test system can be influenced by several variables. The temperature of both the incubation period and the testing period must be constant.[4,7,13,21] Any change in temperature can have a marked influence in activity.[4] Optimum activity was obtained over a pH range of 7.2 to 7.8.[4] Substrate inhibition of the system was observed by Bowers,[4] who found that 10mM of isocitrate gave maximum activity.

The proportion of ICD in various components of whole blood is: plasma – 1, erythrocytes – 86, and platelets – 697.[11] Thus, prolonged contact of the serum with the clot is to be avoided, and hemolyzed blood cannot be used.[4,10,13]

In the sera of apparently healthy adults, the activity of ICD was found to be independent of age, race, sex, or total protein concentration.[14,20,21] Normal values for ICD using the Wolfson and Williams-Ashman method were found to range from 47 to 264 units of activity, with a mean of 109 and a standard deviation of ±56 units.[11,14] In his modified method, Bowers[4] found that the normal ICD activity among a population of fifty adult, healthy males, averaged 90 units with a standard deviation of ±34 units. Most authors suggest 250 to 300 units as the upper limit of normal ICD activity.[4,11,13,14]

ICD is considered an important diagnostic aid in the detection of hepatitis.[2,5,6,7,14,18,20] This opinion is, however, not in agreement with some.[3] It is now well known

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that within the first ten days following the onset of jaundice, serum ICD levels are invariably in excess of the upper limit of normal in patients with acute hepatitis. An increase as great as forty times the normal mean has been found in this disease. Serial determinations of serum ICD in viral hepatitis have shown that the level of activity of the enzyme usually declines to normal around the third week following the onset of icterus.[14] In the chronic form of the disease, serum ICD remained markedly elevated for as long as four months.[14,20]

In about 50% of cases with liver metastases from malignant disease the ICD level was elevated, though never more than six times the normal mean.[20] Elevation of ICD in an individual with malignancy appeared to indicate liver involvement.[14] In portal cirrhosis, serum ICD was usually within normal range, and was never elevated more than three times the normal mean. Most sources seem to agree upon the fact that ICD is usually within normal limits in cases of extrahepatic obstruction,[11,20] but a new study by Watts[17] casts doubt on this point. He suggests that there may be an extrahepatic source of the enzyme. In one study, Bowers[5] found that a larger number of paid blood donors had abnormal serum ICD than did a control group of healthy young persons, suggesting ICD as a possible screening test for the carrier state of infectious hepatitis.[2,5] ICD activity has also been found to be increased in cases of placental infarction.[2,5]

An electrophoretically slow, unstable isoenzyme of ICD exists in the heart, while an electrophoretically fast, stable ICD isoenzyme is located in the liver.[1,19] It had been thought that serum ICD was not elevated in myocardial infarction,[11,14,20] or elevated as a result of secondary liver damage.[12] However, recent evidence indicates that after a myocardial infarction, the electrophoretically slow, unstable enzyme is released, but it rapidly loses its activity.[19]

Material and Methods

Method

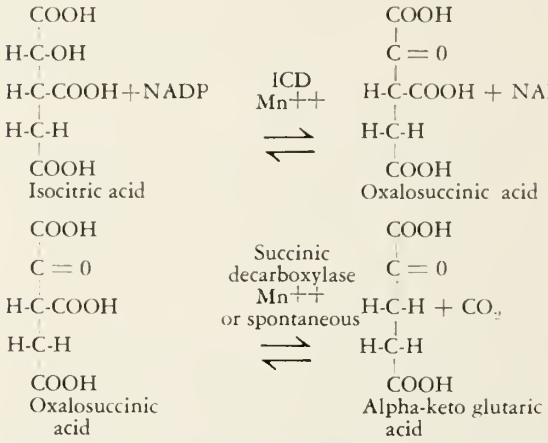
Venous blood was collected from the donor with precautions taken to prevent hemolysis. The serum was removed from the clot as soon as feasible. If the serum could not be tested immediately, it was refrigerated at 4°C., until the test could be performed. The serum was never frozen, owing to a possible 10 to 25% loss of activity.

ICD determinations were run using a continuous recording, Perkin-Elmer 202 Spectrophotometer, coupled with temperature controlled cell mount and time drive accessories. Temperature control was established through an outside Tamson circulating thermostatic bath by means of rubber hoses. The temperature of the system was set at 30°C. ± 0.03°C.

The method followed was that of Wolfson and Williams-Ashman, modified by Bowers. Dilution proportionality was established with Enzatrol in normal saline. Determinations of stability at 4°C. were done on premeasured 1 ml. aliquots of Enzatrol, stored at the above temperature and sampled at intervals.

Principle

Isocitric dehydrogenase, in the presence of manganese ions, catalyses the following reversible dehydrogenation:



The reduced NADP thus enables the reaction to be followed spectrophotometrically, where increased optical density is noted at 340 mu.

Reagents

1. NaCl, 0.15 M. (8.775g. NaCl/1 liter).

2. NADP (TPN), 0.001 M. in 0.15 M. NaCl (100mg. NADP (TPN) dissolved in 120ml. of solvent). Portion 3ml. in small test tubes, stop with rubber stoppers, and store in the freezer. Stable for one year. 100 mg. ampule obtained from Nutritional Biochemical Co.

3. dl – Isocitrate, 0.1M. in 0.15M. NaCl (1g. trisodium isocitrate which contains 15% d-isomer dissolved in 50ml. of solvent). Stable one year while refrigerated. Purchased from Sigma Chemical Co.

4. $MnCl_2$, 0.01M. in 0.15M. NaCl (one 15ml. bottle $MnCl_2$ solution, 0.1M. in 135ml. 0.15M. NaCl). 0.1M. $MnCl_2$ in 0.15M. NaCl purchased from Sigma Chemical Co.

5. Trizma buffer, pH 7.5. 100ml. bottles purchased from Sigma Chemical Co.

6. Trizma – $MnCl_2$ solution: 5 volumes of $MnCl_2$ solution, 2 volumes of NaCl solution, 15 volumes of Trizma buffer. (450ml. Trizma buffer, 60ml. 0.15M. NaCl solution, 150 ml. 0.01M. $MnCl_2$ solution). Refrigerate in brown plastic bottle.

7. Enzatrol – Reconstituted according to directions in bottle. From Dade Reagents Inc.

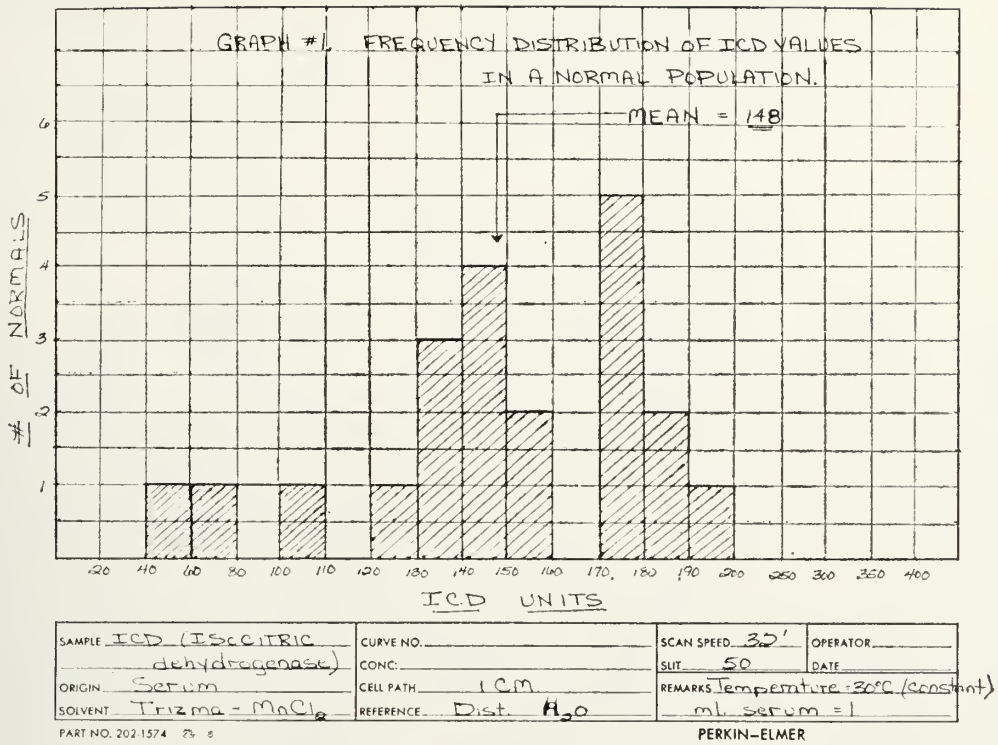
Procedure

1. To 0.5ml. of NADP solution in a test tube (15 x 100mm.) add 1.5ml. of Trizma – $MnCl_2$ solution.

2. Add 1.0ml. of serum and place the tube with contents into a water bath adjusted to a constant temperature of 30°C. The cell compartment of the spectrophotometer must also be maintained at this temperature.

3. Set the spectrophotometer at 340mu., and adjust it to zero with a water blank.

4. After 20 minutes of incubation, transfer contents



Graph. 1. Frequency Distribution of ICD Values in a Normal Population.

of tube to a sample cuvette and bring it back to 30°C. in test cell compartment of the spectrophotometer for 3 minutes.

5. At the end of the 3 minutes, add 0.1ml. of isocitrate substrate (which has also been incubating at 30°C. in the water bath). Mix quickly, set timer for 18 minutes, start recording pen, and note initial absorbance.

6. Record optical density at 3-minute intervals for 18 minutes.

Notes on Procedure

1. If the initial absorbance has an optical density greater than 1.00, or the automatic gain control meter reading of the spectrophotometer is greater than 95, the assay should be rerun with 1.0ml. of diluted serum. The above also applies to samples of high ICD activity, when changes in optical density exceed 0.25 unit per a 3-minute period. Serum should be diluted with normal saline. (Ex. 0.5ml. serum plus 0.5ml. normal saline gives a 1.1, 50% dilution.)

2. Calculate the increase in optical density per minute over a period of at least 6 minutes where the rate was linear (zero order Kinetics).

Calculations: The ICD unit, the measurement of the activity of the enzyme, is defined as the number of millimicromoles of NADP-H_2 formed per 1ml. of serum per hour at pH 7.5, at 30°C.

$$\text{ICD units/ml. serum} = \frac{(\Delta OD/\text{min.}) \times (60)}{(\text{ml. of serum used}) \times (\text{light path}) \times (0.002) \times (TFC)}$$

Using 1ml. of serum in a 1cm. light path cuvette at 30°C.

$$\text{ICD units/ml. serum} = (\Delta OD/\text{min.}) \times (30{,}000) \times D$$

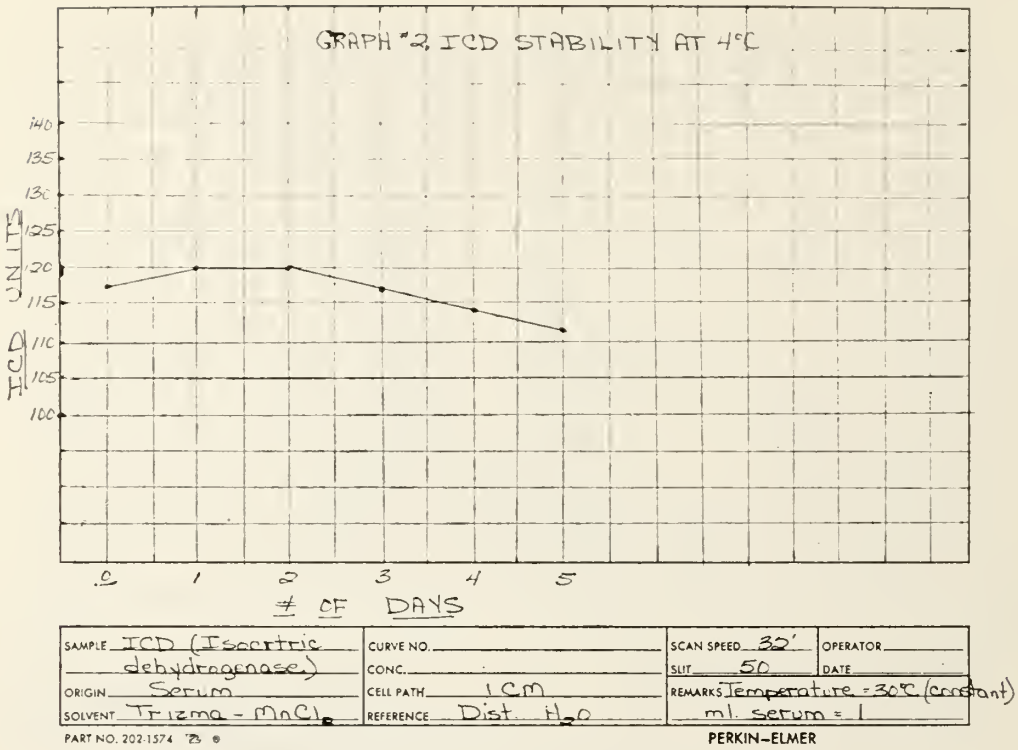
Note: If diluted serum is used, the formula given above must be multiplied by the dilution factor D. If 1ml. of serum is used D is equal to one. ICD units may be expressed as International Units per liter by dividing the regular units by 60.

Results and Discussion

The range of isocitric dehydrogenase activity in 21 laboratory and hospital employees, assumed to be in good health, was 60-193 units, with a mean of 148 and a standard deviation of ±33 units. This can be seen in Graph 1 where the frequency distribution of ICD activity in a normal population is shown. The differences between duplicate measurements on 12 hospital employees ranged from 3 to 26 units with a mean of 15 and a standard deviation of ±11 units.

A student's "t" test to check for statistically significant differences between duplicate samples was performed. The found "t" value of 0.18 for 12 pairs and 11 degrees of freedom was not statistically significant for both levels of P (0.05 and 0.01).

ICD activity was determined in a small group of hospital patients with evidence of hepatic disease. One patient with sclerosing cholangitis and hepatic cirrhosis, proven by biopsy, showed ICD activity of 280 units. One patient with nutritional cirrhosis, proven at autopsy, showed ICD activity of 316 units. A patient suspected of having infectious hepatitis, but on whom no



Graph 2. ICD Stability at 4°C.

biopsy was obtained, showed ICD activity of 2400 units.

The proportionality of dilution and stability of the serum at 4°C. were determined, and the data can be observed in Graph 2 and Table 1, respectively.

The major modifications of this method from those of Wolfson and Williams-Ashman[21] and Bowers[4] are the change in temperature from 25°C. to 30°C., the elimination of a serum blank, and the change in the amount of serum used to 1.0ml.

When the results obtained by Wolfson and Williams-Ashman[21] and Bowers[4] were adjusted from 25°C. to the new recommended standard of 30°C. using Bowers' temperature correction factor[4] of 1.5, their means of ICD activity became 164 and 135 units, respectively. Our mean value of 148 units compared favorably with those two studies.

The results on the proportionality of dilution and the subsequent student's "t" test on duplicate measurements, proved the reliability of this method as far as proportionality and reproducibility. Graph 2 shows that in agreement with the literature, the enzyme is quite stable at 4°C.; thus the serum can be stored at the above temperature for several days without significant loss of activity.

The upper limit of normal is difficult to define precisely from the limited number of normals run. However, the correlation of published data and the fact that known cases of cirrhosis gave values slightly above 300 units, encouraged us to suggest an upper limit of normal close to 200 units and to safely consider values above 300 units as clearly abnormal.

Summary and Conclusions

A normal range of activity for serum ICD in 21 adult, healthy hospital employees, was determined. The results seem to justify the following conclusions:

1. The precision of the method, as compared to those of Wolfson and Williams-Ashman[21] and Bowers,[4] was not significantly altered when the temperature of the test and the amount of serum used were increased to 30°C. and 1.0ml., respectively.
2. Serum blank elimination, originally suggested by Bowers,[4] did, indeed, not influence the accuracy of our test.
3. The enzyme was shown to be quite stable when refrigerated at 4°C.
4. The method shows good proportionality of dilution.
5. A range of 60 to 193 units was found in 21 normal hospital employees. The mean was 148 with a standard deviation of ±33 units.
6. Since no values above 200 units were found among the sampled normal population, an upper limit of normal activity of the enzyme was tentatively set at 200 units. Values above 300 units could be safely assumed to be abnormal. The significance of an ICD activity in the intermediate range will have to be determined by further investigation.

Acknowledgment

The authors wish to express their appreciation to Drs. Richard C. Wadsworth, Director of Laboratories at the Eastern Maine General Hospital of Bangor, Maine and George N.

Continued on Page 254

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Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

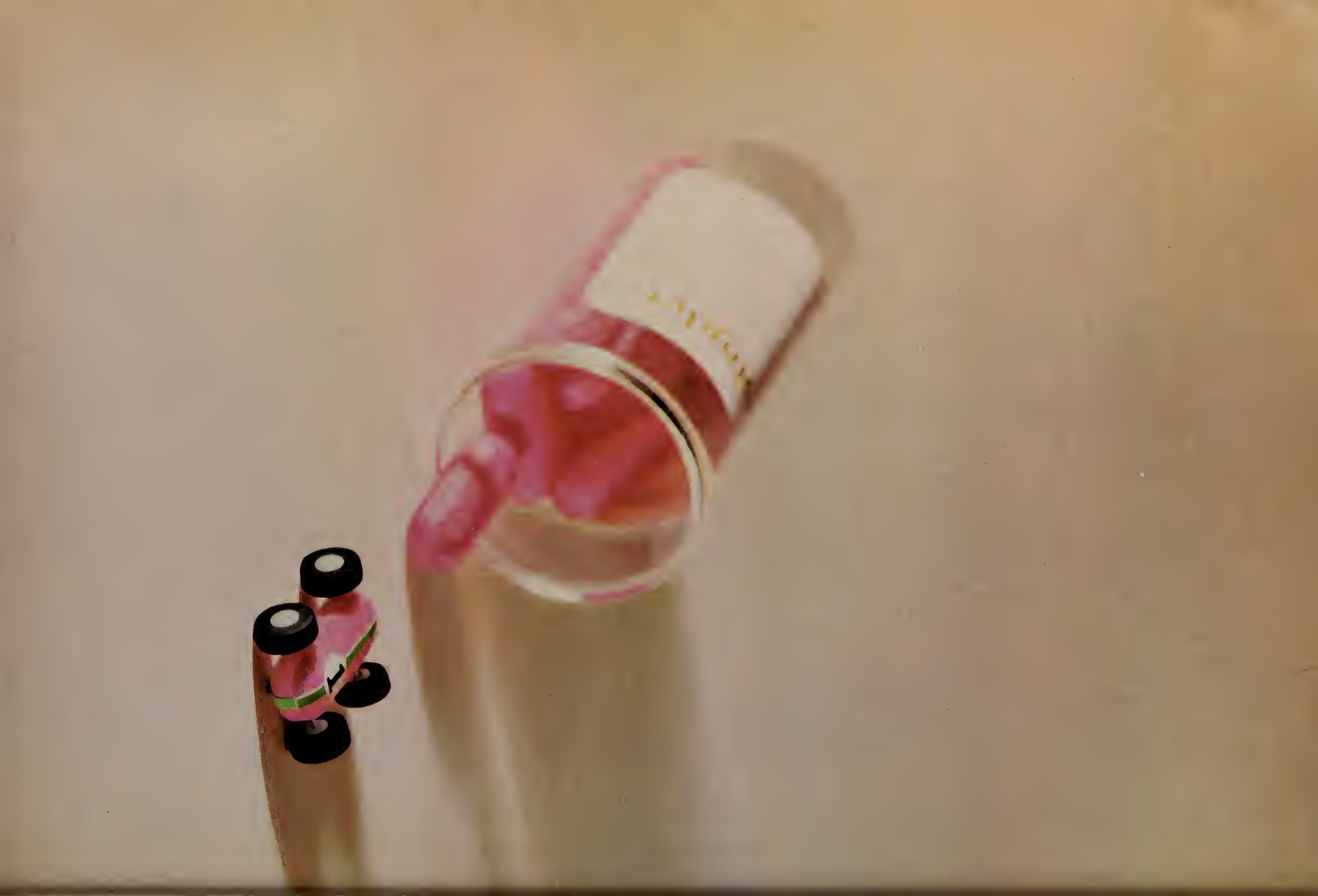
Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching.

The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

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Before prescribing see Detailed Product Information.

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If you think the pink pill for U.R.I. symptoms is built for speed and endurance you're on the right track.

Here is a tablet that begins to relieve symptoms of upper respiratory infection quickly—a tablet that works for hours to make it easy for your patient to enjoy continuous relief.
Novahistine Singlet combines effective dosage of an antipyretic-analgesic with a vasoconstrictor-antihistamine formulation to relieve not only the congestion, but also the fever and the aches and pains that almost always accompany upper respiratory infections.

A total daily dosage of 3 or 4 tablets will normally provide the continuous relief your patient expects. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

PITMAN-MOORE Division of The Dow Chemical Company, Indianapolis, Indiana.

Novahistine®
Singlet decongestant-analgesic

(Each tablet contains: phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; acetaminophen, 500 mg.)

DOW

TABLE 1. SAMPLE SIZE AND PROPORTIONALITY OF DILUTION ON SERUM ICD STUDIES

Sample Size (ml.)	ΔO.D/min	ICD Units
0.50	0.0020	120
0.75	0.0033	132
1.00	0.0042	126

SAMPLE ICD (Isocitric dehydrogenase)	CURVE NO.	SCAN SPEED 32'	OPERATOR
	CONC.	SLIT 50	DATE
ORIGIN Serum	CELL PATH 1CM	REMARKS Temperature = 30°C (constant)	
SOLVENT Trizma - $MnCl_2$	REFERENCE Dist. H_2O	ml. serum : 1	

PART NO. 202-1574 '75' ® PERKIN-ELMER

Table 1. Sample Size and Proportionality of Dilution on Serum ICD Studies.

Bowers, Jr., Departments of Pathology and Medicine, Hartford Hospital, Hartford, Connecticut for their guidance and encouragement without which this work would not have been possible.

Also, special thanks to Dr. Stanley Furrow, Chemistry Department, University of Maine, for his interest and help in preparing the final copy of this paper.

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CASE OF THE MONTH*

Case No. 2

This 18-year-old female patient was admitted with a fever of unknown origin. She had lost about 10 pounds in the past 4 to 6 weeks.

Past and family histories were unremarkable. On physical examination on admission the blood pressure was 140/85, temperature was 99.6. Examination of the systems revealed no pathology.

Urinalysis showed 15 white cells and 3+ bacteria. A urine specimen was obtained after catheterization which revealed pyuria. E-coli was isolated and was found to be sensitive to Amphicillin among other antibiotics. WBC was 6,100 with 1 band, 57 polys, 36 lymphs, 2 monos, 2 eosinophils, 2 basophils. Blood culture was negative after 72 hours. Sedimentation rate was 7. Hemoglobin was 13.7.

VDRL, heterophile and Febrile Agglutin were negative. ASO Titer was positive in 1 to 625 dilution. LE cells were negative. PBI was 5.6 and the 24-hour thyroid uptake was normal. Chest films were negative. The KUB and IVP which showed pathologic changes are presented. On the IVP, the left kidney was small and there were changes of chronic pyelonephritis. However, the interesting and striking incidental findings were those of a round radiolucency seen in the pelvis slightly to the left of the midline. This represents fatty tissue. Within the radiolucency a toothlike structure was noted. On the basis of these findings, the diagnosis of ovarian teratoma was made. Following the IVP, rectal examination revealed a mass on the left side of the pelvis.

On exploration, a cystic tumor measuring 8½ x 5½ cm. in diameter was found. It was removed and when it was opened a large amount of oily, fatty material was found. On opening the cyst, a large amount of hair and a tooth were also found.

Microscopic Examination: Sections of the ovarian mass show a cystic structure in which many epithelial elements are present. In some areas stratified squamous epithelium is noted and near it, one sees clusters of sebaceous glands, apocrine sweat glands and hair follicles. Bronchial type epithelium is also present in some areas and clusters of glands resembling gastric glands are present in small numbers.



Fig. 1. This is the film of the pelvis taken during the IV Pyelogram. The thin arrows marked on the film outline the round radiolucency representing fat. The bold arrows point to the toothlike calcification.

Discussion

Teratomas are recognized by the degree of radiolucency of fat and the presence of teeth-like structures or sometimes other amorphous calcifications.

Although many ovarian lesions exhibit calcification histologically, only a few have been observed radiographically. Approximately 55% of ovarian dermoid cysts and teratomas have characteristic teeth or bone fragments. These are extremely dense compared to other concretions. An ovarian teratoma may be observed to float centrally within the abdomen owing to its overall decreased specific gravity. Large cysts may displace the small bowel and rectosigmoid causing vague symptoms. Rupture or torsion may lead to acute abdominal pain and possibly peritonitis.

Diagnosis: Chronic pyelonephritis on the left with a small kidney. Left ovarian teratoma.

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Radiologic Diagnosis of Acute Abdominal Diseases, The Radiologic Clinics of North America, April 1964.

*From the Maine Institute of Continuing Medical Education, the Augusta General Hospital in association with Veterans Administration Center, Togus, Maine.
Program Directors: Francis J. O'Connor, M.D., Augusta General Hospital and Robert L. Ohler, M.D., Veterans Administration Center, Togus, Maine.
Editor: Demitrios Nikolaidis, M.D., Radiology Dept., Augusta General Hospital, Augusta, Maine.

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

The Concept of Community Mental Health

THOMAS J. KANE, ACSW*

It is crucial, for those of us who are involved in community life, to invest ourselves in projects to the extent that they contribute to the welfare of the community as a whole. The major success of a community endeavor is not the pleasure with which the task was performed, but the degree to which the community gains by the task.

We must not lose sight of the fact that as members of society, everything we do – or fail to do – affects others for better or for worse. For those of us who have taken a responsible role in community affairs it is even more vital that everything that we do be weighed in the light, not only of its own merits, but of its implications for the total community.

This is the basic premise of the concept of Community Mental Health; the interdependence of each one of us on each other as individuals and groups; the fact that weakness in one segment of society weakens the entire structure; and that the mobilization of strength in each segment is essential for the general well-being of the body politic – shall we say.

For the true meaning of comprehensive community mental health is not merely the establishment of a mentally strong and fit community (in the general sense of the word). What community mental health really consists of, I think, is the *dynamic process of interaction* between groups and individuals in the community, (be they professional service agencies, public departments, voluntary groups, fraternal organizations or professional associations) interaction which *mobilizes* each to develop their *resources* to the fullest and to *cooperate* in the challenging venture of *insuring* the mental and emotional well being of each family and individual (man, woman or child) within certain *geographical boundaries.* through the provision of certain *essential services.*

Let me first of all confess that this is my own definition so I cannot hold anyone else responsible to defend it. So please let me try to elaborate. *Process:* Comprehensive Community Mental Health is not a project, or a program, or a service or a building. It is a dynamic process, a process that involves creativity of thought, analysis of facts, modification of plans, communication of resulting ideas, further modification, testing, evaluating, further modification and so on. It is a process which, should it stop growing and improving – will die. For such is the nature of a process.

Interaction: This is not a chemical process which might be easily described through a mathematical formulation – but rather, it is a human process, consisting of the interaction – talking, listening, writing, disagreeing, compromising, rejecting, and approving; the interaction of community conscious individuals and groups. I might mention other key groups – physicians, clergy, police, teachers – all who vitally affect the lives of our people.

Mobilization: My third point is, that no effort can achieve unless it is first mobilized; and to be mobilized requires leadership. We've all been victimized by the saying "Hard work doesn't bother me – I can sit and look at it all day." Unless someone either attracts us by ideal leadership, pulls us by prodding or pushes us by threats – then we may just sit. Mobilization requires a leader and mental health needs a Center. We entertain no illusions that the Center will be a panacea for all problems of living. To the contrary we are extremely mindful of our realistic limitations, and because of this realize the tremendous need for the contribution of efforts by others toward our common goal. The Center will assume its responsibility for the leadership in mental health in our area – that is to attract others by education and encouragement, to assist in the development of services and share the benefits; to pull some, through prodding of words, written and spoken as well as by deeds, meetings, recommendations; finally it may lead through the gentle push of persuasion, identification of problems and responsibility and offers of assistance to tackle the problem.

Resources: Nearly every group of individuals, whether it be a voluntary association, or a professional association or agency, has natural resources which can be developed in the offensive for mental health. Some organizations have financial resources, which can provide the foundation for a program. Most important however is the investment of persons – members or personnel – whose contribution is in the form of understanding, interest and service. All of this spells involvement. We

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develop our resources only by using them, whether they are financial or personal talents. How many of you would keep a large amount of cash in a checking account when it could be reaping interest in a savings account. Yet this is what we do when we allow our resources to lie dormant and collect dust. Our goal is to assist as many groups as possible in the recognition, development, and investment of their resources in the interest of mental health.

Cooperation: All the effort in the world may be fruitless unless there is cooperation – so that the left hand does not undo what the right hand has done. Successful cooperation requires a spirit of goodwill – indeed – but it requires more than such a good intention – it also requires coordination – so that one good intention does not clash with another. Leadership therefore must do more than mobilize – it must coordinate what it moves so that the end result is better and not worse than what existed before.

In planning for mental health, there must be coordination, among all interested parties to insure that good individual planning does not end up in clashes; in duplication of services; in gaps of service, in poor quality service. Our organization provides for such coordination at two levels: 1) within Androscoggin County by the Mental Health Center; 2) and within Mental Health Area #4, which includes Androscoggin, Oxford and Franklin Counties, by an Advisory Board, comprised of representatives from each County. We now have Satellite programs operating in Norway, Rumford and Farmington.

Insuring: It is very important to distinguish between providing service, and insuring the provision of services. The first implies that the Center would directly and by itself assume the sole responsibility for providing mental health services. This idea is, of course, unrealistic and any attempt would be pure folly. What we are saying is that we need others to help us – participating facilities of affiliates – to help us plan, develop and implement the essential services which must be provided.

For this reason we have entered into written agreement with Central Maine General Hospital as well as St. Mary's, through which the hospitals are sharing in the actual provision of services with its own facilities and staff as well as cooperating in helping strengthen the services to be provided directly by the Center.

Needless to say the hospitals are the major affiliates in this endeavor and they deserve considerable recognition for their determination to make this mental health center a success.

Essential services: I'd like now to brief you on what is the very heart of a Mental Health Center – its essential service. The National Institute of Mental Health certainly used the appropriate word when it termed essential five services of outpatient, inpatient, day hospital, 24-hour emergency, and education and consultation services.

Outpatient services: The basic part of our outpatient services which is staffed by psychiatrists, psychologists, and social workers is a program whereby patients referred to the center are helped by the staff to evaluate their problems and what they should do about it. This, we call the intake process. If a person requires a kind of help different from what we provide (for example, a foster home) they are assisted to a more appropriate resource.

If the person's problem is such, and most are, that we are able to help, they are assigned to a member of our professional staff for ongoing treatment. They will be seen for periodic (weekly, bi-weekly, monthly) sessions each of which may last from 15 minutes to 60 minutes, depending upon the need.

The range of problems should through outpatient services range from the minor adjustment problem of a child, and marital problems of couples to severe mental problems of the young and old alike. Many patients are put on medication to help them function better during the treatment process.

Inpatient service: is provided cooperatively by both Central Maine General and St. Mary's Hospitals for acutely disturbed patients who can be treated in the general hospital setting on a short-term basis. The medical director of the Center serves as a consultant to other physicians who have patients who might be experiencing psychiatric problems.

To assist in the treatment of patients, two psychiatric nurses have been assigned to psychiatric inpatient service, one each at CMG and St. Mary's. Our *Day Hospital Program* which is a major innovation in mental health care, consists of a therapeutic program carried on at our Center, under the direction of our medical director, and the supervision of a social worker, psychiatric nurse and occupational therapist. Through this program, we are able to keep many patients out of the hospital or if they have been hospitalized to bring them home sooner. The service is particularly geared to patients whose level of mental disability is such that they can function well under medication, can be brought to the Center during the day and have responsible and helpful supervision at home during the night.

The Twenty-Four Hour Emergency Service is a program sponsored jointly by the Center and the hospitals. The Center focuses the activity on meeting emergency situations when and where they arise by providing immediate telephone consultations to the patient, family, police, friend, clergy, physician, etc. We find that the vast majority of "emergencies" can be prevented from reaching the stage of requiring hospitalization if immediate help is available. To carry out this function, the psychologists and social workers of the Center rotate on call to an answering service from 5:00 p.m. when the Center closes to 9:00 a.m. when it reopens, as well as on weekends. What this means is that the resources of the Center are available 24-hours a day, 7 days a week when needed.

For patients who require immediate hospitalization,

they can be brought to either the CMG or St. Mary's hospital. We are still in the process of expanding this with the hospitals, the need for psychiatric coverage available in the hospitals at nights and weekends.

We have met with the Chiefs of Police of both Lewiston and Auburn as well as the County Sheriff to insure coordination in the transportation of psychiatric patients.

The fifth Essential Service, is educational and consultation services. The goal of the program is to help others in the community, through consultation on specific cases, and education for general orientation purposes, to help them to continue in their roles as "the front-line professionals" in Mental Health. By this I mean, the clergy, police, physicians, teachers, group leaders, yes – even parents.

Our major activity in the area up to now has consisted largely of our school mental health programs. Our program in the Lewiston-Auburn Elementary school has progressed gradually since 1962 and is currently in its sixth year of operation. More recently, in 1965, we inaugurated a program of school mental health services to the four school districts in Androscoggin County outside of Lewiston-Auburn, formed by the Androscoggin County Commission.

The successful implementation of the programs I have described requires more than the availability of a good professional staff. While we have something of which all of us can be justly proud we cannot rest on laurels but must sell it to the communities within our catchment area, if it is going to be an effective tool in combating mental illness before it has reached the destructive levels of which it is capable.

The services of the mental health center will be used only if they are understood and this, as you so well know, will require a major educational process. While we have witnessed major progress in the dismantling of walls of fear and suspicion with regard to mental health, we have a long way to go in building bridges of accurate understanding, appreciation and willingness to use mental health services.

As most of you know, we do not need to solicit for business as we are already working up to capacity.

In some areas of our state, the problem of mental health is an overwhelming incidence with no resources to employ; in other areas it is a problem of an overwhelming incidence and limited and inadequate resources which must be expanded.

In our area – especially as relating to Androscoggin County – our major problem is not one of developing new resources or expanding old ones. We have already done this. Our major problem is one of communicating to our people an accurate understanding of what is available for help;

of mobilizing the resources that we do have so as to maximize their assets for mental health;

of coordinating all of our efforts so as to achieve the greatest benefit possible from the combined effort.

As we proceed in the development of mental health programs, we must be alert to the fact that the most effective mental health program is one that *prevents* mental illness from occurring.

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FUTURE MEETINGS

20th Symposium

TITLE: *Psychiatry and the Internist*
DATE: March 31 to April 2, 1969
DIRECTOR: Paul Jay Fink, M.D. and Wilbur W. Oaks, M.D.
LOCATION: Host Farm Resort Motel, Lancaster, Pa.

TITLE: *Clinical Electrocardiographic Interpretation*
DATE: July 7-11, 1969
DIRECTOR: Leonard S. Dreifus, M.D.
LOCATION: Marriott Motor Hotel, Philadelphia, Pa.

TITLE: *Interpretation of Cardiac Arrhythmias*
DATE: July 14-18, 1969
DIRECTOR: Leonard S. Dreifus, M.D.
LOCATION: Marriott Motor Hotel, Philadelphia, Pa.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Dr. Farber Elected President of the American Cancer Society

NEW YORK, N.Y. — Dr. Sidney Farber, S. Burt Wolbach Professor of Pathology, Harvard Medical School and Chairman of staff of the Children's Hospital in Boston, Mass., was named President of the American Cancer Society at its Annual Meeting at the Waldorf-Astoria Hotel on October 23, 1968.

Dr. Farber served for the past year as Vice President and President-Elect of the Society. Since 1927 he has been a member of the teaching staff of the Harvard Medical School. He has long been recognized internationally as the founder of modern pediatric pathology. It is said that he has been responsible for training more men and women in this field than were trained by any institution in the world.

Dr. Farber's research helped spark the great developments in the chemotherapy of cancer, especially in the treatment of leukemia.

In 1947, Dr. Farber founded the first institution in the world devoted to research and care of children with leukemia and all other forms of cancer, the Children's Cancer Research Foundation in Boston. Since its inception he has been its director of research.

Dr. Farber received the Memorial Cancer Center Judd Award in 1954 and the Albert Lasker Award in 1966. He has been a Fellow in the American Academy of Arts and Sciences since 1949. In 1960, Dr. Farber served on the United States Senate Committee of Consultants on Medical Research which gave recommendations concerning medical research and education for the following ten years. He has been Chairman of the Subcommittee on Cancer of the President's Commission on Heart Disease, Cancer and Stroke since 1964.

At the same meeting, the ACS announced election of Dr. Jonathan E. Rhoads, John Rhea Barton Professor of Surgery, School of Medicine, University of Pennsylvania, to the post of Vice President and President-Elect.

Dr. Jonathan Rhoads is currently Chairman of the Medical and Scientific Committee of the American Cancer Society. Born in Philadelphia, Pa., Dr. Rhoads received an A.B. degree from Haverford College, Haverford, Pa., in 1928. He was awarded an M.D. degree from Johns Hopkins in 1932 and a Ds.C. degree in 1940 from the University of Pennsylvania.

A former President of the Philadelphia Division of the American Cancer Society and Director-at-Large since 1965, Dr. Rhoads is currently member of the board of Friends Hospital, Philadelphia, Haverford College, Bryn Mawr College, Provident Mutual Life Insurance, South Jersey Medical Research Foundation, and the Pennsalt Chemicals Corp.

American Cancer Society News Release

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Prognosis Of Men With Coronary Heart Disease As Related To Blood Pressure

. . . Studies of different human populations have shown that individuals with relatively high levels of blood pressure are more apt than other individuals to develop cardiovascular disease and to manifest such disease at a relatively young age. This study deals with the prognosis of men from the time clinical diagnosis of angina pectoris or myocardial infarction and examines the extent to which hypertensives exhibit a less favorable course in comparison with men of the same age who had lower levels of blood pressure.

. . . Cases are obtained from a study based on 55,000 men aged 25 to 64 years enrolled in the Health Insurance Plan (of Greater New York). Among men whose disease begins as angina pectoris, the "hypertensives" are two and one-half times as likely to suffer an infarction and cardiac death . . . in a period of 30 months of observation following the diagnosis.

In this population a myocardial infarction was by far the commoner initial clinical manifestation . . . The early mortality was twice as high in the hypertensives after taking age differences into account. This relative disadvantage continued long after the period of early mortality . . . hypertensives on the basis of their pre-infarction blood pressure exhibited a much higher recurrence rate throughout the 4.5-year period of observation following their initial MI. Their relative disadvantage was even greater with respect to the risk of cardiac death.

Hypertension thus may promote the development of obstructive coronary artery disease by accelerating atherogenesis while simultaneously increasing the requirement for coronary blood flow . . . This combination of circumstances might be expected to lead to myocardial ischemia, angina pectoris, myocardial infarction, and sudden death. An hypertrophied heart . . . might be less capable of adapting to an acute myocardial infarction than the nonhypertrophied heart of a normotensive subject.

These data cannot be interpreted to indicate whether lowering of the blood pressure would reduce these adverse influences. . . . They do add support to the suggestion that the level of arterial blood pressure is a major factor which determines the rate of development of generalized and coronary atherosclerosis. . . . These observations add urgency to the desirability of . . . trials . . . designed to test the hypothesis that reduction of elevated blood pressure levels in men apparently free of coronary heart disease will reduce their risk of incurring this disease and dying from it.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Charles W. Frank, et al, Circulation, Vol. 38, pages 432-437, 1968.

County Society Notes

YORK

Twenty members and two guests were present at the meeting of the York County Medical Society which was held at the Webber Hospital in Biddeford, Maine on October 9, 1968.

Following a social hour and dinner, the meeting was called to order by the Vice-President in the absence of the President.

Charles F. Branch, M.D. of Auburn, Chief Medical Examiner for the State of Maine, gave a very interesting and instructive talk on the duties in the broad field of Medical Examiners. A very interesting question and answer period followed.

CHARLES W. KINGHORN, M.D., *Secretary*

LINCOLN-SAGADAHOC

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on October 15, 1968. The meeting was called to order by the President, Mary J. Tracy, M.D.

The secretary read The Rural Emergency Medical Services Plan proposed by the AMA. The County Society approved the plan by voice vote.

Francis A. Winchenbach, M.D. reported that the Associated Hospital Service must soon have a program of "Usual and Customary Fee" for national group policies and explained some of the problems connected with this requirement. The Society approved the concept for these groups and felt that the preferred fee arbitration committee would be the Maine Medical Association's Health Insurance Committee. The members present then joined in a discussion of fee schedules.

Charles E. Burden, M.D., the speaker of the evening, spoke in defense of Fluoridation.

The Society unanimously supported the campaign to fluoridate the Bath water supply.

GEORGE W. BOSTWICK, M.D., *Secretary*

ANDROSCOGGIN

The Androscoggin County Medical Association met at St. Mary's General Hospital in Lewiston, Maine on October 17, 1968. The meeting was called to order by the President, Joseph J. Rando, M.D. with twenty-two members present.

Eustache N. Giguere, M.D. read the eulogy on the death of Maurice Brien, M.D. It was moved and voted to enscribe our records with a copy of this eulogy, send a copy to his wife and a copy to the Maine Medical Association.

John W. Carrier, M.D. introduced the speaker of the evening, Manu Chatterjee, M.D., who discussed the intent of the Regional Medical Program.

The AMA's Rural Emergency Medical Services plan was approved.

Carleton H. Rand, M.D. was elected to Senior membership. Elected to membership were Stanley E. Herrick, Jr., M.D. by transfer from the Lincoln-Sagadahoc County Medical Society and Andre Marcotte, M.D.

Charles W. Steele, M.D. outlined some of the business factors to be discussed at the Blue Shield meeting next week. It was moved and voted that Dr. Steele act in behalf of the Society with a full vote of confidence.

Thomas F. Shields, M.D. made a motion that the Androscoggin County Medical Association appropriate funds not to exceed $50.00 for public endorsement of the Androscoggin County Medical Association for fluoridation of water supplies of Lewiston and Auburn in newspapers, this to be managed by a member to be appointed by the president of the Androscoggin County Medical Association. This motion was seconded and voted on favorably. Dr. Rando appointed Dr. Shields to serve in this capacity.

DONALD L. ANDERSON, M.D., *Secretary*

COUNTY SOCIETY OFFICERS

ANDROSCOGGIN

President, Joseph J. Rando, M.D., Lewiston
Secretary, Donald L. Anderson, M.D., Lewiston

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YORK

President, Eugene P. Wolfahrt, M.D., Saco
Secretary, Charles W. Kinghorn, M.D., Kittery

SOMERSET

The Somerset County Medical Society held its fall meeting at the Oak Pond Motel in Canaan, Maine on October 22, 1968 with its guest speaker Francis J. O'Connor, M.D. from Augusta giving the group a most enlightened talk on nuclear medicine. The group was most impressed with the variety and usefulness of the readily available techniques which were discussed.

Antoine Atallah, M.D. of Jackman Station was elected to membership in the Society.

The nominating committee suggested that the entire slate of officers be continued into 1969. This was passed unanimously.

JOHN P. DOW, M.D., *Secretary*

CUMBERLAND

A meeting of the Cumberland County Medical Society was held at Boone's Restaurant in Portland, Maine on October 17, 1968 with approximately 90 members and guests attending. Following a social hour and dinner, the meeting called to order by the President, Eugene P. McManamy, M.D.

The following doctors were voted into membership: Dr. John J. Lorentz by transfer from York County Medical Society and Drs. Peter Webber, Bruce LaFollette, Leland Cornelius, Paul Minton, Robert Sommer and Michael Leckie.

Alice A. S. Whittier, M.D. read a resolution on the death of Lloyd W. Bishop, M.D., a copy of which is appended to the Society records. It was moved and voted that a copy be sent to the family.

A letter from Ferris Ray, M.D. reminded the membership that at the November meeting, there would be several guest doctors who would conduct a symposium on Full-time Physician Coverage of Emergency Divisions. A letter from the AMA recommended discontinuing the use of whole pooled plasma. A letter from Wallace H. Duffy, M.D., Chairman of the Maine Medical Association's Rural Health Committee, asked for this Society's approval for the committee to coordinate rural health facilities of adjacent communities and to educate the people in rural health. It was moved and voted to approve the Rural Health Committee's plan. A letter from the Maine Medical Association reminded the membership that a new booklet for classification of tuberculosis was available on request.

Mr. George Brown, who was a guest at this meeting, spoke briefly on the Donor Call Service, Inc., a private organization to establish a walking blood bank. Donor Call Service received recommendations by several physicians including Drs. Niles L. Perkins and James H. Bonney, and all of the members were urged to belong and to get their patients to join.

Dr. McManamy reminded the membership that if guests are to be invited to Cumberland County meetings, it is only proper for the member inviting the individual to obtain permission from the president. Harold N. Burnham, M.D. suggested that a specific rule be formulated concerning the attendance of guests at the Society's meetings.

Several bylaw changes were proposed. Henry B. Finks, M.D. proposed that a rule be formulated to require at least one month's notification to the membership before a gift or grant of over $100.00 could be made. Laban W. Leiter, M.D. proposed that an ad hoc committee be appointed by the president to study the feasibility of the formation of an Executive Committee of the Cumberland County Medical Society, and that the ad hoc committee should report at the December meeting. Dr. McManamy, president, recommended that bylaws be changed to provide for a two-year tenure of office for the president of the Society. Dr. McManamy also felt that it was time to revise the bylaws of the Society, and said that he would appoint a committee to do so.

Albert Aranson, M.D. reported from the Insurance Committee that the premiums for Professional Liability Insurance would be increased this coming year. He also reported that the Health Insurance Committee was involved with Blue Shield's attempt to formulate a "BSD" contract based on usual and customary fees. Blue Shield's proposition is to pay 95% of the usual and customary fee. This plan would have no income limit. The reasons for such a policy were discussed by Charles R. Geer, M.D. Maurice Van Lonkhuyzen, M.D. moved that the Cumberland County Medical Society favor the establishment of a Blue Shield Program of full coverage based upon the usual and customary fee. This motion was carried. He also moved that the Cumberland County Medical Society oppose the principle of deducting a certain percentage of the usual and customary fee for administrative purposes. This motion was amended by Robinson L. Bidwell, M.D. by eliminating the word "administrative" and replacing it with the word "any." The amendment was carried, and then the motion as amended was carried.

John R. Davy, M.D. who was to speak on the Model Cities Concept was introduced, but Philip P. Thompson, Jr., M.D. moved that because of the late hour his speech be postponed to a special meeting. This was passed.

GEORGE F. SAGER, M.D., *Secretary pro tem*

WASHINGTON

A meeting of the Washington County Medical Society was held at Dennys River Inn in Dennysville, Maine on October 28, 1968 with nine members present.

Robert G. MacBride, M.D. of Lubec was elected delegate and Donald F. Robertson, M.D. of Milbridge as alternate delegate to the Maine Medical Association House of Delegates.

A short discussion of the Maternal and Infant Care program was held with a presentation of cases that had so far come under the program's care.

The Society voted to approve the AMA's Rural Emergency Medical plan.

There was a short discussion of the present Medical Examiner system with the general feeling that it probably would work out satisfactorily.

Hazen C. Mitchell, M.D. of Calais discussed a recent meeting of the Regional Medical Program, with particular emphasis on the Anti-smoking Program. It was planned to lecture to various groups with slides and literature furnished by the Regional Medical Program. Dr. Mitchell also discussed the feasibility of a county-wide utilization committee made up of the three hospitals now active in the county, with a monthly meeting with the representatives of each hospital.

John Kazutow, M.D. of Columbia Falls discussed the new Blue Shield usual, customary, and reasonable fee program presented by Blue Shield and approved by the Health Insurance Committee.

It was voted to hold the next meeting on the last Monday in November with a discussion at that time of the Blue Shield Fee Program.

KARL V. LARSON, M.D., *Secretary*

New Members

ANDROSCOGGIN

Stanley E. Herrick, Jr., M.D., Central Maine Gen. Hosp., Lewiston 04240 (Transferred from Lincoln-Sagadahoc County Medical Society – 10/17/68)

Andre P. Marcotte, M.D., 342 Main St., Lewiston 04240

AROOSTOOK

Jeanne C. Ballard, M.D., c/o I. M. Hayward, M.D., So. Main St., Caribou 04736

Tibor G. Selmeci, M.D., Hayden Ct., Woodstock, N.B., Canada

CUMBERLAND

Russell C. Briggs, M.D., Maine Medical Ctr., Portland 04102

Leland R. Cornelius, M.D., Hospital Dr., Bridgton 04009
Ghazar H. Darakjian, M.D., 56 Baribeau Dr., Brunswick 04011
Bruce F. LaFollette, M.D., 157 Pine St., Portland 04102
Michael I. Leckie, M.D., 94 Auburn St., Portland 04103
Lawrence M. Leonard, M.D., 7 Bramhall St., Portland 04102
John J. Lorentz, M.D., Maine Medical Ctr., Portland 04102 (Transferred from York County Medical Society – 10/17/68)
Paul R. Minton, M.D., 131 Chadwick St., Portland 04102
Robert G. Sommer, M.D., 47 Deering St., Portland 04101
Peter B. Webber, M.D., 233 Vaughan St., Portland 04102

HANCOCK

Edward J. Palmer, M.D., Maine Maritime Acad., Castine 04421

KENNEBEC

Raymond E. Culver, M.D., 14 Gilman St., Waterville 04901
Laurier E. Nolin, M.D., 14 Gilman St., Waterville 04901
Stella L. Uldall, M.D., Augusta State Hosp., Augusta 04330

LINCOLN-SAGADAHOC

Richard Evans, III, M.D., 781 High St., Bath 04530

SOMERSET

Antoine A. Atallah, M.D., Main St., Jackman Station 04946
Ernest W. Stein, M.D., 72 Main St., Pittsfield 04967 (Transferred from Waldo County Medical Society – 8/68)

YORK

Conner M. Moore, M.D., 372 Main St., Saco 04072

News, Notes and Announcements

Huddilston Medal Awarded to Brinton T. Darlington, M.D. of Augusta

Brinton T. Darlington, M.D., Augusta physician, was awarded the 1968 Roselle W. Huddilston Medal for "outstanding contributions in the field of general health to the people of the State of Maine," by the Maine Tuberculosis and Health Association, at its annual meeting in October.



Dr. Darlington, left, receives Huddilston Medal from Dr. Ervin.

In the citation of Dr. Darlington as 11th Medalist, Dr. Edmund R. Ervin, Waterville, the 1967 Medalist who presented the award for the Association, said "Dr. Darlington's strongest recommendations for this honor are threefold: first, the application of a true dedication to health service; second, the utilization of a high grade of knowledge and intelligence in health planning and programming; and third, the willing contribution of a great deal of time and effort to many health activities and organizations over many years."

Among the many services performed by Dr. Darlington, the citation contained reference to his work in tuberculosis control to which he has devoted much effort and served as president of the Maine TB and Health Association and the Maine Thoracic Society, as well as being a member of both the 1960 and 1966 Maine Tuberculosis Conferences; his work with the Maine Heart Association of which he is currently a vice-president; his chairmanship of the Maine Interagency Council on Smoking and Health; and his contributions to organized medicine through service to his county and state medical associations and the Augusta General Hospital.

Dr. Darlington has been a president of the Maine Society of Internal Medicine. He also serves as a director of the National Tuberculosis and Respiratory Disease Association.

Officers Elected to Maine Tuberculosis and Health Association

Marion K. Moulton, M.D., West Newfield, was reelected president of the Maine Tuberculosis and Health Association at its recent annual meeting.

Other officers elected were: Lloyd Brown, M.D., Bangor, Bradley E. Brownlow, M.D., Blue Hill, and Elmer L. Mitchell, Manchester, vice-presidents; Harold L. Jones, Augusta, treasurer, and Alonzo H. Garcelon, DDS, Augusta, assistant treasurer.

Elected president of the Maine Thoracic Society, medical section of the state tuberculosis association, was Emerson H. Drake, M.D., Portland.

H. Richard Hornberger, M.D., Waterville, was named vice-president, and Bradley E. Brownlow, M.D., was reelected secretary.

22nd National Conference on Rural Health March 21-22, 1969

Philadelphia Marriott Motor Hotel

Philadelphia, Pennsylvania

Postgraduate Continuation Course In Gastroenterology

The Institute of Gastroenterology, Good Samaritan Hospital, and the Veterans Administration Hospital in Phoenix are co-sponsoring a postgraduate continuation course in Gastroenterology in Phoenix. The course will be held at the Del Webb Towne House on February 21 and 22, 1969. The purpose of of this course will be to relate current physiological knowledge and newer diagnostic techniques to clinical gastroenterology with particular attention toward the therapy of the disease. Faculties include J. Edward Berk, Henry L. Bockus, Robert J. Bolt, Thomas C. Chalmers, J. Lynwood Herrington, Nicholas Hightower, Hans Popper, Fenton Schaffner, Kenneth W. Warren and others. Further information and registration forms may be obtained from Dr. David C. H. Sun, Good Samaritan Hospital, Phoenix, Arizona 85002.

Third National Congress on Socio-Economics of Health Care

The Council on Medical Service and the Division of Health Service of the American Medical Association will sponsor the Third National Congress on Socio-Economics of Health Care on March 28-29, 1969 at the Palmer House in Chicago.

Theme: Major Issues in Health Care: The Challenge to Medicine.

Purpose: To signify the medical profession's ongoing concern for the effective organization, delivery and financing of health care services, and to bring together authorities from medicine, health care administration, social science, education, community planning and other disciplines to report on new issues and techniques in this area.

Book Review

Current Concepts in Ophthalmology by Bernard Becker, M.D. and Robert C. Drews, M.D. Published by The C. V. Mosby Co., St. Louis. 265 Pages. 127 Illustrations. $17.25.

This book consists of a collection of essays by twenty members of the staff of the Department of Ophthalmology, Washington University School of Medicine, St. Louis, Missouri.

The result is not meant to be a unified discussion of modern ophthalmology but rather a collection of topics of particular concern to the individual authors.

Many of the current concepts of ophthalmology including the present scope of photocoagulation, tonography, applanation, tonometry, the relationship between topical corticosteroids and intraocular tension, opthalmodynamogrophy, hemocystinuria and the use of urokinase in the treatment of traumatic hyphema have been discussed in considerable detail.

Four chapters are devoted to tonography and reflect the interest of one of the authors. Although this is a fascinating subject, we feel that such a degree of emphasis on one item in a relatively small text covering a broad expanse of modern thought in ophthalmology detracts from the book.

We found the final chapter, "Ethical Principles in Ophthalmology," quite interesting. The author feels strongly that the basic principles epitomized in the Oath of Hippocrates remain unchanged. Some of the ideas expressed under the headings of *Advertising* and *Duties to other Physicians* are probably at variance with opinions of some readers.

The text should prove to be of merit to investigators, residents and practicing ophthalmologists.

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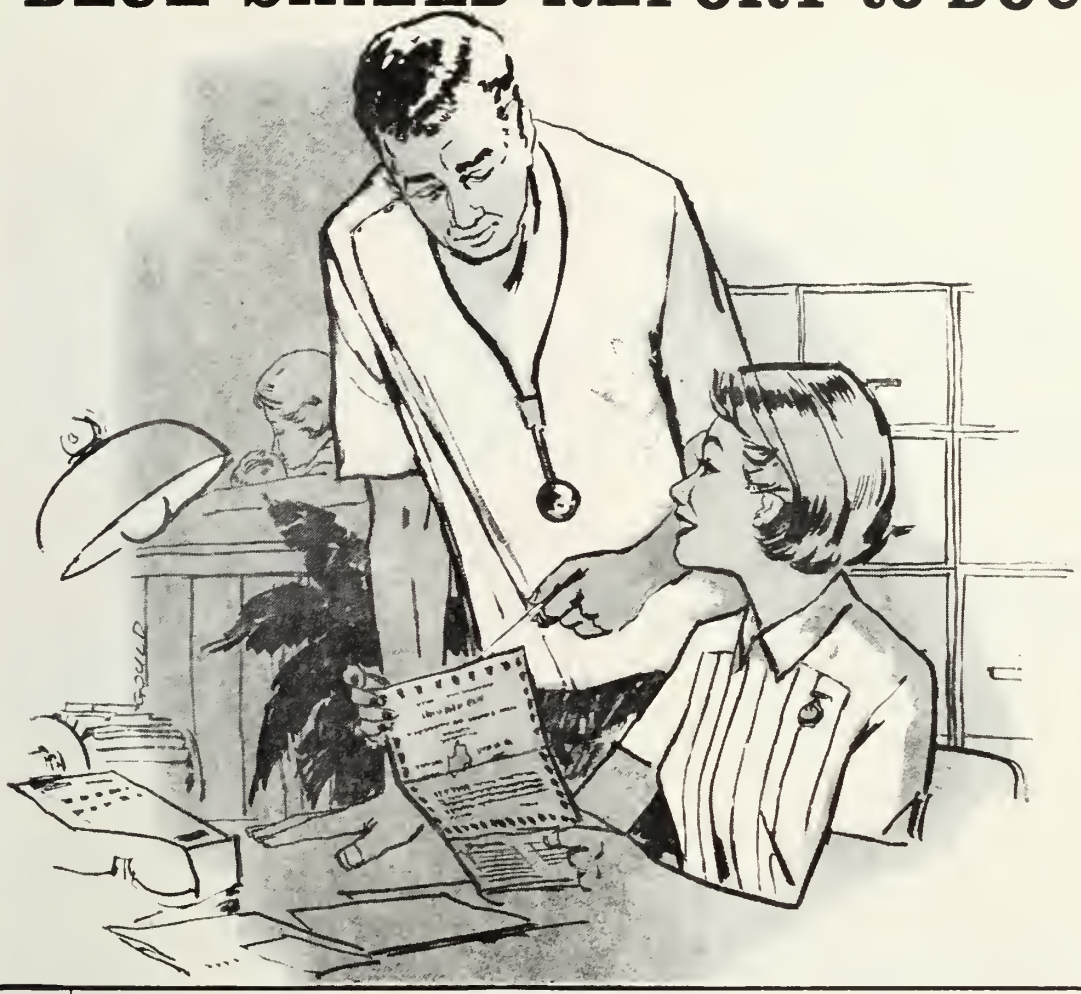

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A BLUE SHIELD REPORT to DOCTORS



REPORT # 19

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BLUE CROSS AND OTHER INSURANCES ARE ACCEPTED



ANDREW FERGUS, M.D.
Diplomate, American Board of Psychiatry
Chief of Staff

TAKEO KAWAMURA, M.D.
Psychiatrist
Sec. of Staff

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- Alcoholics

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Beautful Grounds, Large Rooms with Bath, Mental Health Care for the Aged and Convalescent Care.
Reasonable Rates

In the complex picture of moderate to severe anxiety...



there is a new reason for prescribing Mellaril (Thioridazine HCl)

effectiveness in mixed anxiety-depression

Long recognized for its usefulness in the treatment of moderate to severe anxiety, Mellaril is now also known to be effective against mixed anxiety-depression.

Often the symptoms of anxiety states are difficult to sort out—even with the most careful probing. The patient may manifest symptoms of agitation, restlessness, insomnia, somatic complaints. But what of the depression that may be mixed in the total picture? It is reassuring to know that Mellaril may be prescribed—with strong possibilities of success—when there is anxiety alone or a mixture of anxiety and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

Mellaril®
(Thioridazine HCl) 25 mg. t.i.d.

for moderate to severe anxiety and mixed anxiety-depression

SANDOZ SANDOZ PHARMACEUTICALS, HANOVER, N. J. 68-169

Q. How much does the **anticostive*** **hematinic** cost?

A. No more than costive hematinics cost!

The anticostive hematinic is

PERITINIC®

Hematinic with Vitamins and Fecal Softener

A tablet-a-day provides:

● Elemental Iron (as Ferrous Fumarate)	100 mg
● Dioctyl Sodium Sulfosuccinate (to counteract constipating effect of iron)	100 mg
Vitamin B_1	7.5 mg
Vitamin B_2	7.5 mg
Vitamin B_6	7.5 mg
Vitamin B_{12}	50 mcgm
Vitamin C	200 mg
Niacinamide	30 mg
Folic Acid	0.05 mg
Pantothenic Acid	15 mg

Bottles of 60

*anticostive, *adj.* (*anti* opposed to + *costive* causing constipation.) Against constipation. Now isn't that a good idea in an iron-containing hematinic?

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

TAO® (triacetyloleandomycin)

Brief Summary

INDICATIONS: Include staphylococci, streptococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents.

CONTRAINDICATIONS: Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug.

PRECAUTIONS: CAUTION: USE OF THIS DRUG MAY PRODUCE ALTERATIONS IN LIVER FUNCTION TESTS AND JAUNDICE. CLINICAL EXPERIENCE AVAILABLE THUS FAR INDICATES THAT THESE LIVER CHANGES WERE REVERSIBLE FOLLOWING DISCONTINUATION OF THE DRUG.

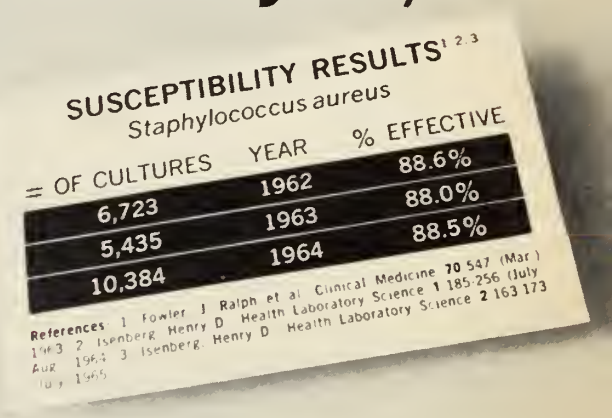
Not recommended for prophylaxis or in the treatment of infectious processes, which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgment dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including dark-field examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

ADVERSE REACTIONS: Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.

Rx ROERIG

J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

In vitro
susceptibility results
with TAO® (triacetyl-
oleandomycin)
in *Staphylococcus aureus* cultures,
as shown in
studies of
antibiotics.



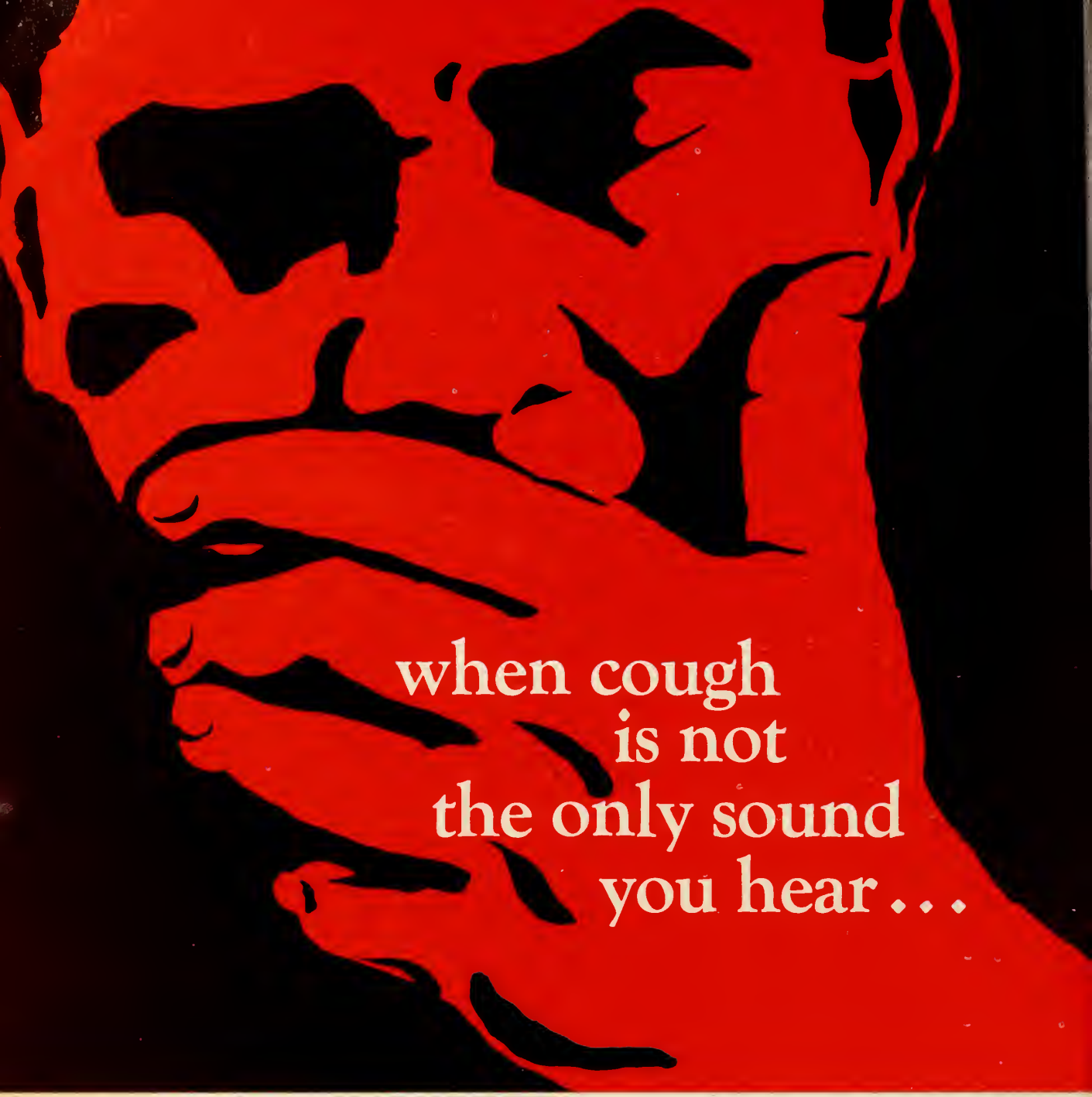
SUSCEPTIBILITY RESULTS[1,2,3]
Staphylococcus aureus

= OF CULTURES	YEAR	% EFFECTIVE
6,723	1962	88.6%
5,435	1963	88.0%
10,384	1964	88.5%

References 1 Fowler J Ralph et al Clinical Medicine 70 547 (Mar) 1963 2 Isenberg Henry D Health Laboratory Science 1 185-256 (July Aug 1964 3 Isenberg Henry D Health Laboratory Science 2 163 173 July 1965

TAO® (triacetyl-
oleandomycin)
is a macrolide antibiotic, for use only in
the treatment of acute severe
infections where adequate
sensitivity testing has
demonstrated susceptibility
to this antibiotic and resistance
to other less toxic agents.





OMNI-TUSS® b.i.d.

. . . **because** OMNI-TUSS is indicated for cough associated with upper respiratory tract infections, bronchitis, bronchiectasis, bronchial asthma, emphysema, sinusitis and rhinitis, hay fever, or other allergic conditions. Any of these conditions may exhibit the general symptom syndrome—coughing, wheezing, bronchospasm, and tenacious mucus—which may benefit from the antitussive, bronchodilative, antihistaminic, and expectorant action of Omni-Tuss.

The therapeutic usefulness of Omni-Tuss is enhanced by a unique resin complex formulation providing the clinically desirable advantages of: (1) uniform drug availability throughout an extended period, (2) 8 to 12 hours of symptomatic control, (3) minimal dosage requirement, (4) minimal side effects.

Economical, efficient **b.i.d.** dosage—extremely well-tolerated by children, 6-12, and adults.

'Omni Tuss' Suspension: Each teaspoonful (5 cc.) contains 10 mg. codeine (Warning: May be habit-forming), 5 mg. phenyltoloxamine, 3 mg. chlorpheniramine, 25 mg. ephedrine, all as cation exchange resin complexes of sulfonated polystyrene, and 20 mg. guaiacol carbonate.

Available on prescription only. Class X exempt narcotic. Permissible on oral prescription.

Dosage: *Adults:* 1 teaspoonful (5 cc.) q12h.
Children (6-12 *years*): ½ teaspoonful q12h.

Side Effects: Minimal, but when encountered may include jitteriness, nausea, drying of mouth, insomnia, constipation, which disappear upon adjustment of the dose or discontinuance of treatment.

Precautions and Contraindications: For complete detailed information, refer to package insert or official brochure.

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Strasenburgh Laboratories Division
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Tuberculosis? Influenza?
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Systemic Fungal Diseases?
Chronic Chest Diseases?
or

HISTO?

(Histoplasmosis—"The Masquerader")



A new aid in differential diagnosis

HISTOPLASMIN, TINE TEST
(Rosenthal)

The LEDERTINE™ Applicator with the Blue Handle

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

Lederle

Ask your representative for details or write Medical Advisory Dept., Lederle Laboratories, Pearl River, New York 10965. 406-8


Knee-deep

in osteoarthritic pain

If aspirin doesn't help, move in with Tandearil.

The trial period is brief: 1 week. Try one tablet q.i.d. at first. Tandearil usually starts working within 3 to 4 days. When response occurs, as little as 1 or 2 tablets daily may hold back pain and stiffness, and increase joint motion.

On the next page is a summary of adverse reactions, contraindications, warning and precautions.

Tandearil.
It can help get his mind off his knee.

Please review full Prescribing Information carefully before prescribing.

For osteoarthritic knees, spines, shoulders, hips, etc.:

Tandearil®
oxyphenbutazone

Tandearil, oxyphenbutazone:
For brief summary see next page.

Geigy

TA-6006



Tandearil®
oxyphenbutazone

Contraindications: Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

(B)R-46-800-A

For complete details, please see full Prescribing Information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

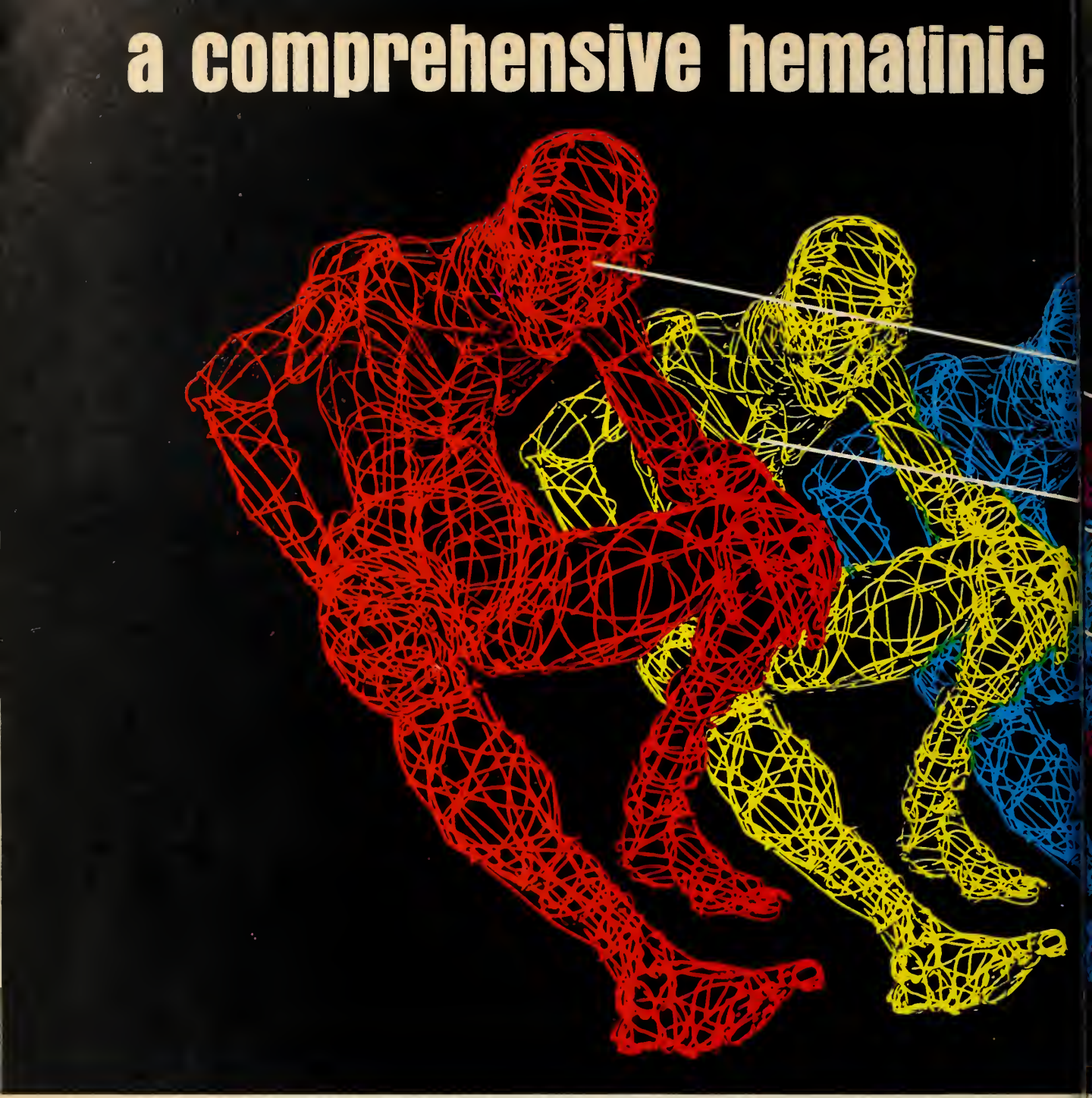
DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67



a comprehensive hematinic



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	150	mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin (The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	7.5	mcg.
Iron, Elemental (as Ferrous Fumarate)	110	mg.
Ascorbic Acid (Vitamin C)	75	mg.
Folic Acid	1	mg.

Indications: Trinsicon® (hematinic concentrate with intrinsic factor, Lilly) is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia.

Contraindications: Hemochromatosis and hemosiderosis.

Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

In pernicious anemia, the use of folic acid without adequate vitamin B_{12} therapy may result in hematologic remission but neurological progression. Adequate doses of vitamin B_{12} (parenteral, or oral with potent intrinsic factor as in Trinsicon® [hematinic concentrate with intrinsic factor, Lilly]) usually prevent, halt, or improve the neurological changes.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B_{12}. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic



You can treat combined deficiencies with

Trinsicon®

—the multifactor hematinic

Vitamin B_{12} plus intrinsic factor (15 mcg. B_{12} activity)—helps provide adequate levels of this important vitamin.

Folic acid (1 mg.)—treats nutritional macrocytic anemias and/or malabsorption syndromes.

Ascorbic acid (75 mg.)—augments the conversion of folic acid to its active form and helps iron absorption.

Iron (110 mg.)—treats hypochromic anemia.

clinical and laboratory studies are considered essential and are recommended.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastro-intestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects.

In extremely rare instances, skin rash suggesting allergy has followed oral administration of liver-stomach material. Instances of apparent allergic sensitization have also been reported after oral administration of folic acid.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500. [032568]

Additional information available to physicians upon request.

Eli Lilly and Company, Indianapolis, Indiana 46206.

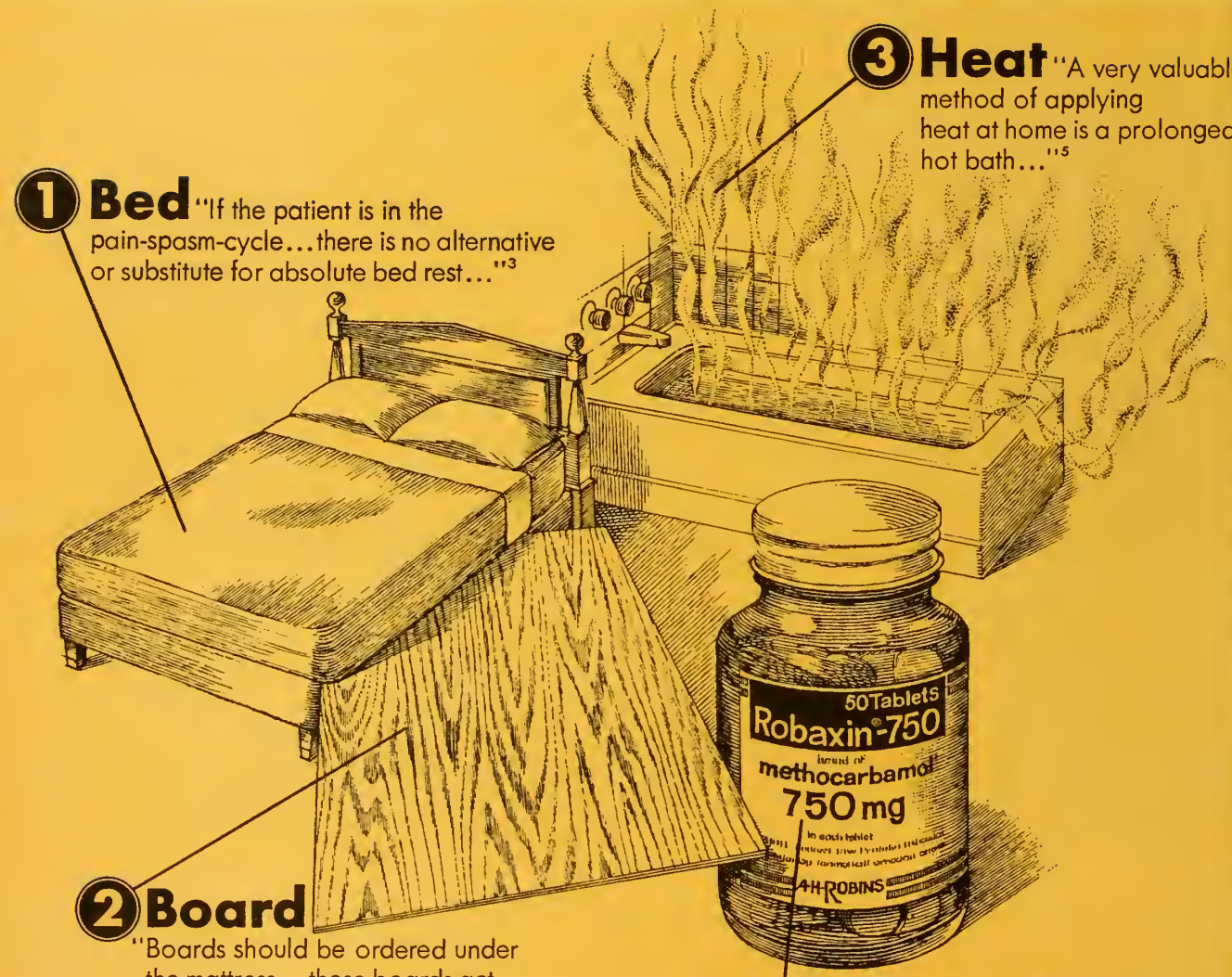
801668

Lilly

LOW-BACK PAIN

A CONSERVATIVE, FOUR-POINT PROGRAM

The low back pain that is most frequently seen in general practice is mechanical in nature, i.e., postural back pain, joint dysfunction and acute back strain.[1,2] For this type of discomfort, a conservative regimen is usually sufficient to relieve aches and pains, and to help keep the patient functioning. Components of this basic program include:



1 Bed "If the patient is in the pain-spasm-cycle...there is no alternative or substitute for absolute bed rest..."[3]

2 Board "Boards should be ordered under the mattress...these boards act by immobilizing the spine..."[4]

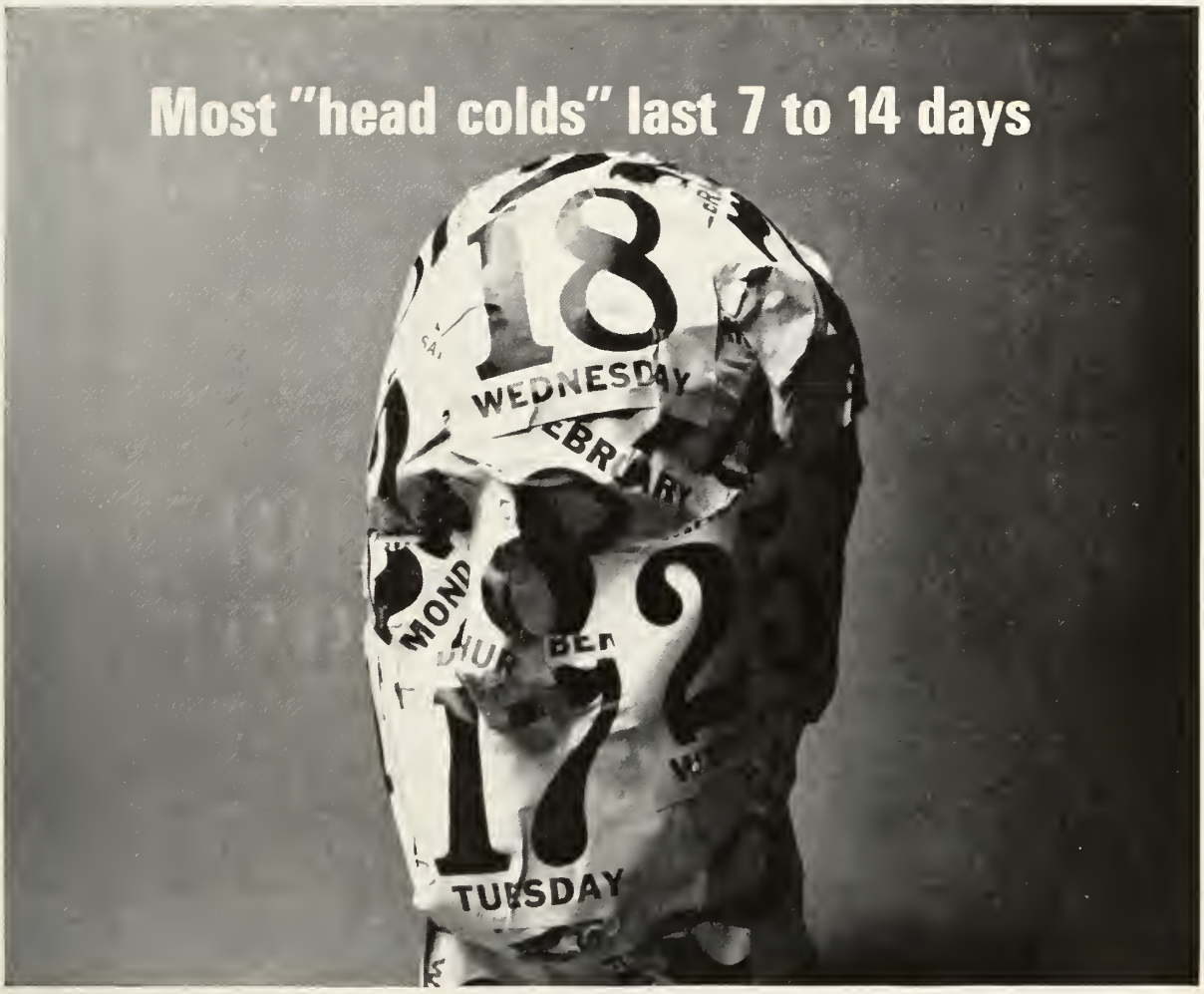
3 Heat "A very valuable method of applying heat at home is a prolonged hot bath..."[5]

4 Robaxin®-750 (methocarbamol, 750 mg. capsule-shaped tablets) A well-tolerated[6] skeletal muscle relaxant, methocarbamol helps relieve spasm "...without interfering with normal tone and movement."[7] And there is little likelihood of sedation.[6]

Indicated for relief of skeletal muscle spasm. **Contraindicated** in hypersensitive patients. **Side Effects** (lightheodedness, dizziness, drowsiness, nouseo) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently. See product literature for further detoils. **Also available:** Roboxin® Tablets (methocarbamol, 500 mg.) Robaxin Injectable (methocarbamol, 1 Gm./10 cc.)

References: (1). Godfrey, C.M.: Applied Therap. 8:950, 1966. (2). Gottschalk, L.A.: GP 33:91, 1966. (3). Rowe, M.L.: J. Occup. Med. 2:219, 1960. (4). Cozen, L.: South Dakota J. Med. 18:26, 1965. (5). Soto-Hall, R.: Med. Sc. 14:23, 1963. (6). Weiss, M. and Weiss, S.: J. Am. Osteopath. A. 62:142, 1962. (7). Feuer, S.G., *et al.*: New York J. Med. 62:1985, 1962.

A·H·ROBINS A. H. ROBINS COMPANY RICHMOND, VIRGINIA 23220



In the meantime...Ornade®

Prompt relief from nasal congestion and hypersecretion due to colds.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease, warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.
Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible adverse reactions of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.
Supplied: Bottles of 50 capsules.

One capsule q12h for round-the-clock relief

Ornade® Trademark. Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, 2.5 mg. of isopropamide, as the iodide.
Spansule® capsules brand of sustained release capsules

SK&F Smith Kline & French Laboratories

ready for bed..



...but not for sleep

...because psychic tension may not stop at night

The calming action of Valium (diazepam) helps counteract psychic tension and reduce overreaction to stresses during the day. Often the t.i.d. dosage schedule is enough to prevent build-up of tenseness that may interfere with sleep at night.

However, when psychic tension does contribute to sleeplessness, Valium can be especially useful. A tablet at bedtime, added to the daytime t.i.d. dosage, can help your patient be ready for bed *and* for sleep.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium®
(diazepam)

ROCHE

Roche®
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

